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THE OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

THE WEEK'S NEWS INTERPRETED

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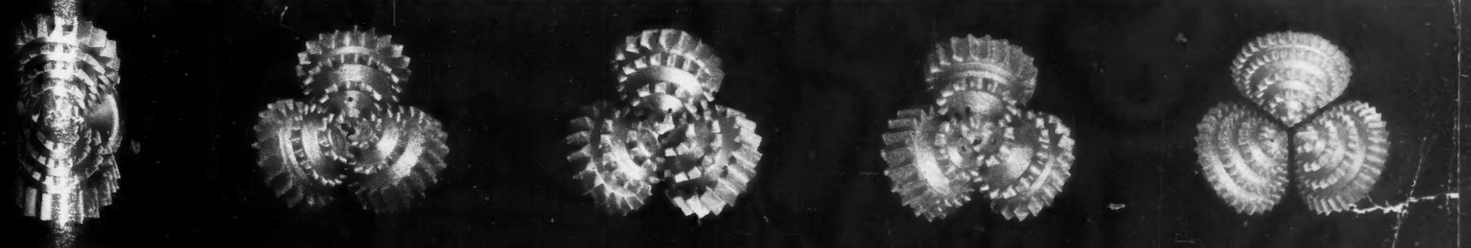

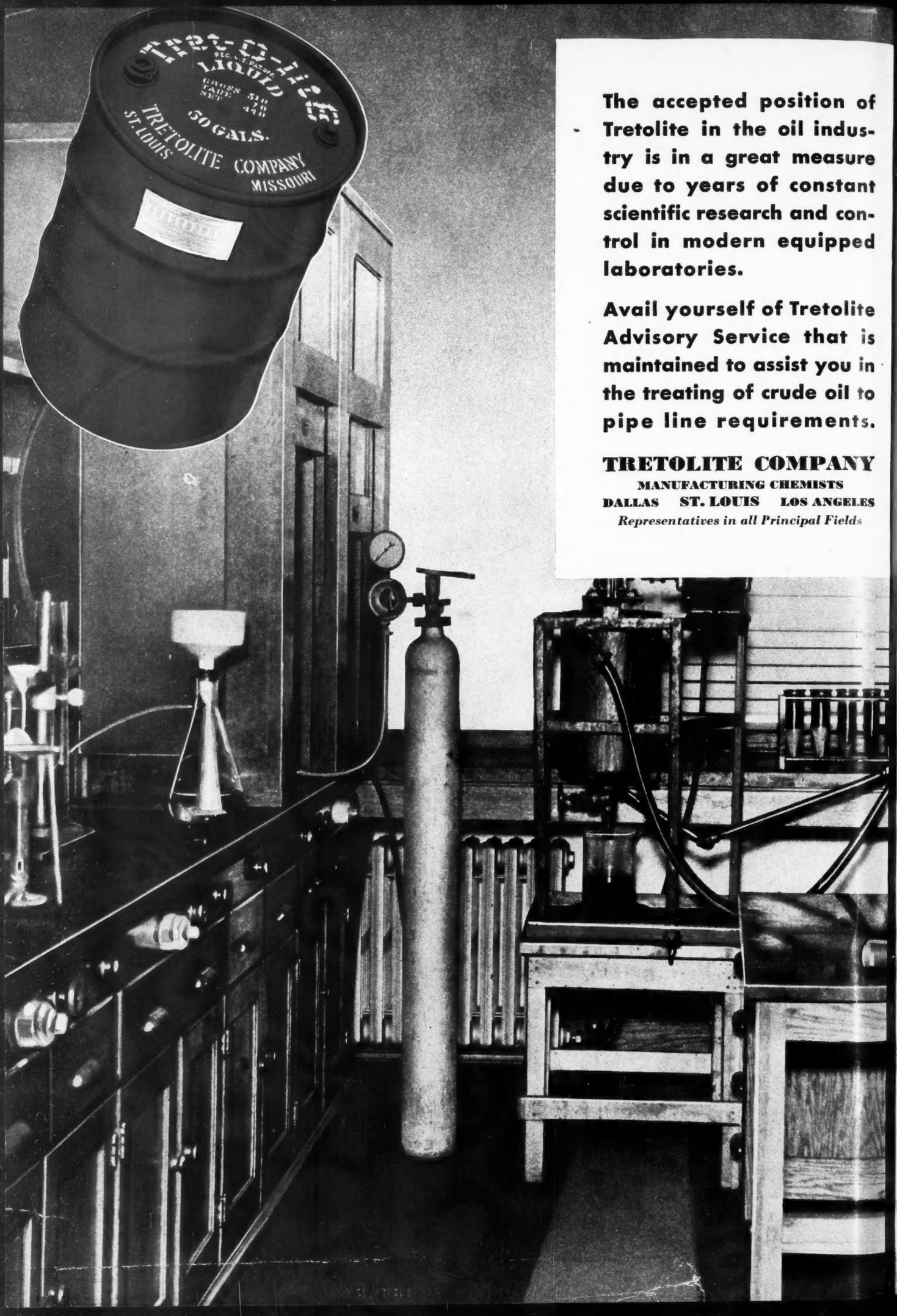

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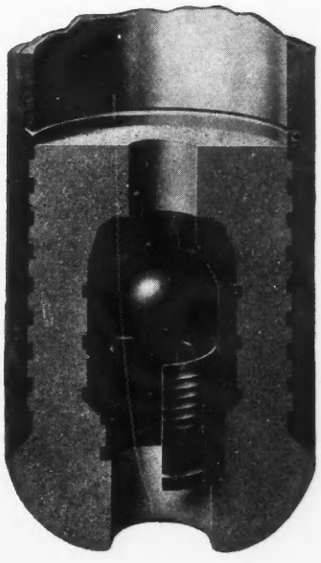

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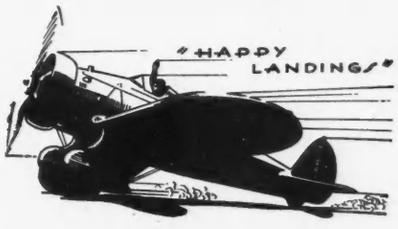

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THE OIL WEEKLY

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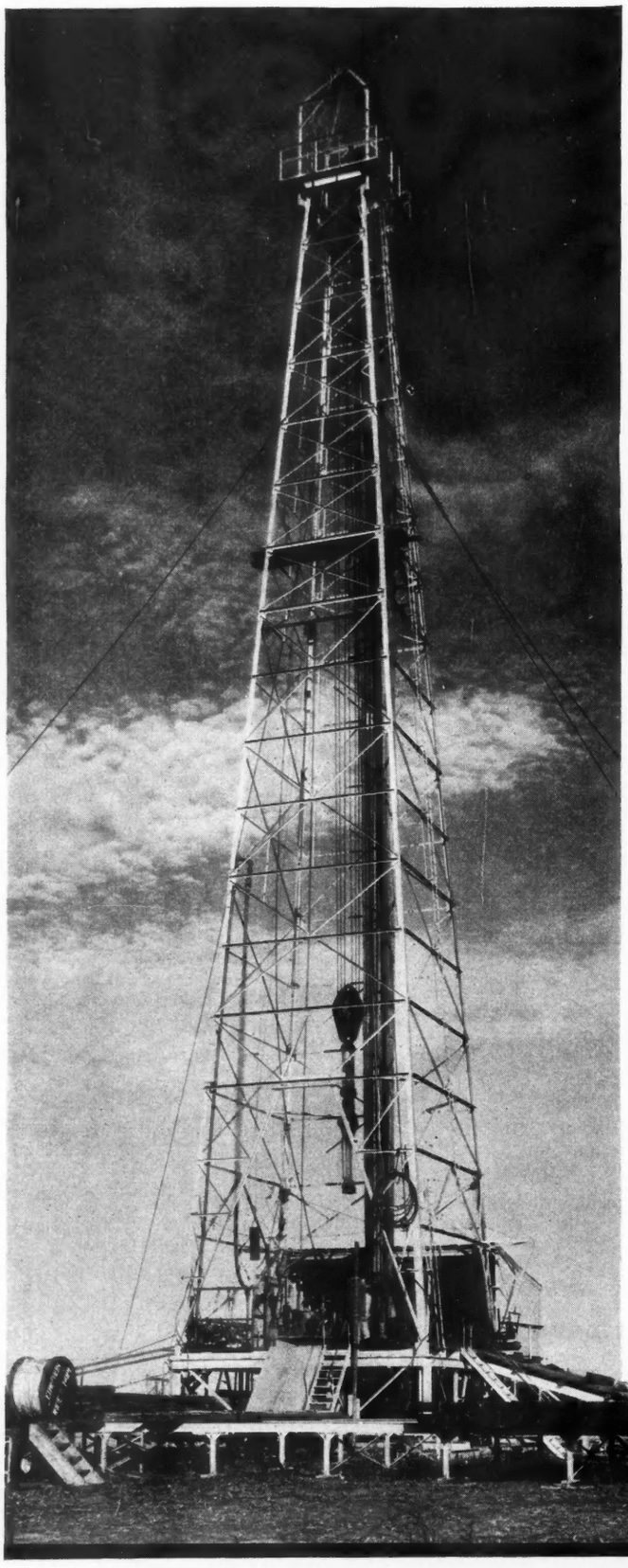

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THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor

This Week:

STATISTICS for the month of November reveal that the industry continued to be in a strong position. Production during the month was near the all-time peak level of the previous month, but nevertheless material reductions were made on stocks. Thus, market requirements absorbed not only the production from wells but additional volumes. As a result, crude stocks dropped farther beneath a 15 year low level. The continued balance of supply and demand promoted an extension of favorable market conditions, with fuel oil and kerosene advancing, and gasoline moving upward slightly. These factors lend strength to the belief that the recent move to advance crude prices after the first of the year will result in some sort of general increase, despite the fact December promises not to be as favorable due to increases made in various state production allowables.
Page 9

AS THE smoke cleared after the first battle in the suit in which the government is charging the oil industry with violating the anti-trust laws, the industry had won. Lawyers representing the oil companies last week at Madison were successful in entering a motion challenging the legality of the grand jury that returned the indictments despite the objection of the government attorneys. The judge gave the government 30 days in which to file a demurrer or answer to the plea. It is not known just what form the government's reply will take, but it will have an important bearing on the trial.
Page 8

BY AN overwhelming vote majority, Oklahoma last week became the first state to approve renewal of the Interstate Oil Compact Commission, which expires in September. The bill is now ready for the signature of Governor Marland, and he is expected to sign it at once.
Page 8

AS expected, Kansas' allowable for December last week was fixed at five percent in excess of the recommendations of the Bureau of Mines. This puts the state's daily crude allowable production at 163,225 barrels, which is approximately 9000 barrels over the November daily allocation.
Page 8

PAN American Production Company obtains half interest in most of the acreage within the geophysical picture covering the recently discovered Charenton field in Southern Louisiana, thereby strengthening its bid for prominence in coastal oil circles. The block consists of 25,572 acres and involves 67 leases. In less than two years the company has built up 2000 barrels daily production in Southern Texas and 600 barrels in Southern Louisiana.
Page 13

ANOTHER large integrated company came into existence, and under the guidance of Harry F. Sinclair, when courts approved the merger of Richfield Oil Company, Pan American Petroleum Company and Rio Grande Oil Company under the name of Richfield Oil Corporation. The company will have ample capital, large gasoline manufacturing and distributing facilities, pipe line systems and a fair amount of production.
Page 13

IN East Texas a wholly-automatic device is being used for shutting off the flow from tanks connected to gravity lines before the oil level has dropped sufficiently to permit air to enter. The mechanism is too simple and inexpensive to at once attract attention. It consists entirely of wooden balls dropped into the tanks, and which float on the oil surface. Whenever the oil content reaches the outlet pipe level, suction draws one of the balls over the mouth, which completely seals the line until additional crude raises the oil level sufficiently to release the ball. The practice has been perfected to a remarkable degree in East Txas.
Page 19

THE most equitable well spacing program seems to be one that takes into consideration such factors as sand conditions, oil in place, depth of productive sand, market requirements, gas energy, capital investment, and human nature. Even if the present study of well spacing problems results in a complete understanding and agreement on these factors, it will always be a difficult task to develop a well spacing plan suitable to a large number of operators.
Page 24

Next Week:

DUG-OUT canoes take you up the Zulia to Santa Maria, the eastern end of the mule trail leading to Petrolea camp, carved from the jungle. From there to Puerto Barco—adventure. A 40-foot river boat, screened with heavy wire to protect you from arrows of hostile Indians, takes you up the river. On either bank there is nothing but solid jungle, with only a rare glimpse of a thatched hut in a clearing. But a glimpse of a Motilone — no. You know he's near, though when his six-foot arrow suddenly arrives out of nowhere. Here at Puerto Barco the driller, the truck driver, et al., if they care for life, must wear side arms. Those—and the story of its conquest by Gulf, Texaco, and Socony-Vacuum—are the reasons why the Barco Concession has been called "one of the three most interesting production developments in the world." You'll agree it is—after reading next week's OIL WEEKLY.

HOW much has the increased demand for certain types of refined products affected the movement of crude oil in several producing districts? Crudes that will make aviation gasoline and better grades of lubricating oil are in great demand, and the consumption of fuel oils has enlarged the need for heavy crudes, consequently producers and refiners are searching for crudes that offer a solution to the shortage problem. The affect of the change in specifications of refined products on crude oil consumption will be presented in an article next week.

Industry Wins

FIRST ENCOUNTER IN ANTI TRUST SUIT AT MADISON

MADISON, WIS.

THE oil industry won its first encounter with legal forces of the federal government here Monday when Federal Judge Patrick T. Stone delayed prosecution of major oil companies and prominent oil officials for alleged violation of the Sherman anti-trust law through the operation of buying pools in the Mid-Continent and East Texas fields.

Over the objections of government attorneys, William J. Donovan, New York attorney heading the legal forces of the oil industry, was successful in entering a motion challenging the legality of the grand jury which so far has indicted 26 major oil companies, 70 individuals and three trade journals. Donovan's motion was entered before arraignment of the corporate defendants and 17 of the individual defendants which was scheduled to take place here last Monday.

Judge Stone gave government attorneys 30 days in which to file a demurrer or answer to the plea entered by Donovan.

Just what form the government's reply will take has not been indicated. If an answer is filed to challenge the issue raised by the defense attorney, trial of the industry's motion must be held before trial of the cases proper can proceed. If, through a demurrer, government attorneys contend the issue raised by Donovan has no bearing on the cases, Judge Stone will either rule in favor of the government and order trial of the cases on their merits or sustain the contention of defense attorneys and throw the entire matter out of court.

It is believed here that the government is most likely to demur to the complaint of Donovan. If, then, the court overrules the demurrer, sustaining the defendants, a new grand jury and new indictments will have to be sought.

If new indictments are returned, the same procedure of holding removal hearings for the defendants in their own states will have to be followed, throwing actual trial of the cases well into next year.

Donovan's challenge of the legality of the grand jury, which has been in almost continuous session here since May 4 investigating practices in the oil industry, came as a distinct surprise to government attorneys.

John Henry Lewin, Baltimore, and Hammond E. Chaffetz, Washington, special representatives of the attorney general in charge of the prosecution, expected challenge of the indictments on grounds of jurisdiction. They were prepared to argue that gasoline produced in Mid-Continent and East Texas refineries, on which the price was allegedly raised through illegal operation of buying pools, was sold in Wisconsin, thereby making the federal court here eligible to hear the charges. A motion seeking dismissal of the charges on behalf of Mid-Continent Petroleum Corporation and three officials of that company previously had been filed here.

There is a difference of opinion between defense and government counsel as to whether merely sale of the gasoline in Wisconsin is sufficient ground on which to try the case here. The meetings between major oil company representatives at which arrangements for buying distress gasoline from independent refiners were held outside this state.

Government charges revolve around the buying pools of the major companies, inaugurated under the National Recovery Act, which, since invalidation of the act, were allegedly used to "squeeze out" independent jobbers or marketers and artificially raise the price of gasoline to the consumer.

Two indictments have thus far been returned by the grand jury Donovan challenged Monday. Many of the defendants are charged in both indictments. The grand jury is still in session.

"This is a plea in abatement (to quash the indictments) for two reasons," Donovan said. "First, the grand jury that found and returned the indictments was not lawful as required by the fifth amendment to the constitution which says that no person shall be deprived . . . of liberty without due process of law. Second, the law requires that the names of all jurors shall be publicly drawn from a box containing the names of at least 300 persons."

Donovan explained that the federal law passed in 1879 required that the clerk of the court and the jury commissioner, who were to be of opposite political parties, shall alternately place names of prospective jurors one at a time in a box from which the names of the jurors shall be drawn.

"Louis D. Sumner, then jury commissioner for this district, did not take his place with the clerk in putting the names of the grand jurors in a box in July, 1930," Donovan continued. "Herbert C. Hale (clerk of the federal court) wrote a form letter in 1930 to postmasters in counties of this district, asking them to select names of persons to make up a grand jury list. He got approximately 840 names. On June 9, 1930, without the

[*Continued on page 54*]

RENEW COMPACT

Oklahoma first state to vote renewal of compact

OKLAHOMA CITY.

OKLAHOMA became the first state to vote renewal of the Interstate Oil Compact Commission, which expires in September, when it was passed by the House of Representatives here last week by a vote of 102 to 2, and is now ready for the signature of Governor E. W. Marland. Congress approved the compact agreement, and a bill will be presented at the next session for extension of this approval.

The other compacting states, including Texas, Kansas, New Mexico, Colorado and Illinois, are expected to take some action on the matter at an early date. Increased interest in the compact and its purpose was evidenced at the last session held in Oklahoma City on December 1, 1936, where representatives from five non-compacting states were present. They were: California, Michigan, Indiana, Pennsylvania and Kentucky.

ALLOWABLE IS SET

Oklahoma figure set at 595,350 barrels per day

OKLAHOMA CITY.

DAILY production was set at 595,350 barrels by the Oklahoma Corporation Commission, which met in special session December 11 to re-consider the December allowable, previously set at 567,000 barrels to match recommendations of the United States Bureau of Mines. The order is retroactive to December 1. Actual production for the week closed was 592,200 barrels daily.

The order marks the first instance of the Oklahoma Commission disregarding recommendations of the federal agency in fixing allowables.

The commission met November 27 and fixed the allowable to match the recommendation from Washington. Then it was learned that the Texas Railroad Commission had fixed an allowable five percent higher than the figure recommended for the state. Oklahoma officials declined to sign their order.

While the Independent Petroleum Association of America and the Interstate Compact Commission were meeting here November 30 and December 1, Oklahoma officials announced their decision to reset the case and leave the November figure standing.

At that time it was indicated that the Kansas Corporation Commission might reconsider its December allowable following the Oklahoma decision. The Kansas allowable matches the recommendation of the United States Bureau of Mines.

RAISE ALLOWABLES

Kansas goes five percent over Bureau figures

TOPEKA.

THE Kansas Corporation Commission on December 8 fixed the state's daily allowable production for the month at 163,225 barrels, which is five percent in excess of the consumer demand estimated by the United States Bureau of Mines, and approximately 9000 barrels over the November daily allocation.

It had been expected that this action would be taken in view of Texas having decided upon such action earlier.

"While the commission has generally sought to follow the Bureau of Mines and regards it as the best guide available, since it is a disinterested fact-finding body," the commission statement said, "the commission was convinced that there is a larger consumer demand for December than the Bureau of Mines figures indicate.

"One evidence of this is the fact that there have been lately steady and material withdrawals from storage."

Industry's Position Is Strong

Near all-time peak production during November offset sufficiently by large demand to cause withdrawals on stocks

By L. J. LOGAN, Associate Editor

ALTHOUGH this month is bringing less favorable results in the control of crude production, the oil industry during November clung to the strong position that it previously had gained.

Aided by a continuation of remarkably high consumption of crude oil and products, the industry continued to profit by a close balance between supply and demand. Average daily crude production was not far under the all-time peak of October. But market requirements kept in step, absorbing, in fact, not only the output of the wells but also some oils from the storage tanks.

Stocks Continue Decline

The nation's crude stocks continued to shrink, despite the fact production restraints had been somewhat liberalized, and during November showed a net decrease of approximately 2,500,000 barrels. During the month the crude inventories dropped further to a new low mark of 288,630,000 barrels, although they already had dipped to the lowest level for over 15 years.

The November withdrawals from crude storage were in no sense artificial, moreover, as refineries did not turn out more refined oils than the markets were absorbing. In fact, some refined products were not produced in quantities equaling the demand. Finished gasoline production, for instance, fell a little short of the demand, and over one half million barrels came from storage. There had been some fear that the seasonally high production of fuel oils would cause a piling up of gasoline stocks. But such a development did not materialize in November, probably because of refiners' efforts to lower gasoline yield as well as because of the remarkably well sustained consumption of gasoline.

Markets Improve Further

The continued balance between supply and demand promoted an extension of favorable market conditions. Fuel oil and kerosene prices continued to move upward during November, and gasoline prices also improved slightly. The crude market reflected the strength of the refined oil markets, continuing firm.

The firmness of the markets has continued into December. Product prices remain steady and show a tendency to rise further. The strength of the crude market has been evidenced by the recent move toward higher prices. Several companies have scheduled a 17 cent a barrel increase in Mid-Continent crude prices effective January 4, although it is not yet known whether the increase will be generally accepted.

Control Less Strict

While the move toward higher crude prices reflects the oil industry's highly favorable statistical position, the absence of immediate general acceptance of the higher prices also is perhaps significant. It is true that the industry has achieved a very advantageous position, in which stocks are the lowest for many years.

But it is true, also, that the restraints

Finished Gasoline Stocks

(Totals reported to the American Petroleum Institute, by companies owning about 90 percent of the country's refining capacity. Actual totals for nation must take into account the additional stocks not reported.)

DATE	Total Barrels Reported
September 29, 1934	43,850,000
October 27	41,993,000
November 17	*39,892,000
December 1	40,831,000
December 29	43,969,000
January 26, 1935	47,888,000
February 23	54,399,000
March 2	55,654,000
March 16	†57,406,000
March 30	56,388,000
April 27	55,097,000
June 1	53,180,000
June 29	50,007,000
July 27	48,157,000
August 31	43,787,000
September 28	42,976,000
October 26	41,163,000
November 9	*40,780,000
November 30	43,190,000
December 28	46,472,000
January 4, 1936	47,288,000
January 25	50,368,000
February 1	52,831,000
February 29	60,881,000
March 21	†62,855,000
March 28	62,559,000
April 25	61,638,000
May 30	59,589,000
June 27	57,263,000
July 25	54,087,000
August 29	49,952,000
September 26	47,427,000
October 31	48,579,000
November 21	*47,213,000
November 28	47,897,000
December 5	48,487,000

* Low point of year.
† High point of year.

Crude Oil Stocks

Bureau of Mines figures as compiled monthly, comprising all crude in storage in the United States.

At End of:	Total Barrels In Storage
October, 1934	346,415,000
November	341,165,000
December	337,254,000
January, 1935	338,174,000
February	337,319,000
March	339,139,000
April	339,793,000
May	338,559,000
June	334,757,000
July	329,351,000
August	324,966,000
September	320,705,000
October	317,155,000
November	315,558,000
December	314,631,000
January, 1936	313,081,000
February	310,812,000
March	313,189,000
April	315,389,000
May	315,169,000
June	311,046,000
July	306,390,000
August	301,757,000
September	295,693,000

Trend of stocks situation since end of September, figures being from weekly reports of Bureau of Mines.

October 31	291,040,000
November 21	289,454,000
November 28	288,630,000

United States Production

(Based on American Petroleum Institute estimates, which do not include oil that may have been surreptitiously produced.)

MONTH	Daily Average (Barrels)	Federal Estimate of Demand
January, 1934	2,233,505	2,183,000
February	2,239,070	2,183,000
March	2,339,950	2,282,800
April	2,420,950	2,366,200
May	2,575,380	2,366,200
June	2,588,100	2,528,300
July	2,560,550	2,530,300
August	2,475,300	2,449,300
September	2,431,950	2,341,700
October	2,364,150	2,325,800
November	2,375,400	2,340,300
December	2,414,600	*2,307,000 †2,460,300
January, 1935	2,500,850	2,460,300
February	2,521,250	2,526,100
March	2,568,800	2,520,300
April	2,559,750	2,527,300
May	2,601,350	2,561,200
June	2,695,100	2,651,000
July	2,707,150	2,660,000
August	2,676,250	2,600,600
September	2,737,750	2,613,000
October	2,780,850	2,554,200
November	2,825,900	2,563,700
December	2,826,850	2,540,200
January, 1936	2,818,300	2,559,200
February	2,774,450	2,648,100
March	2,828,750	2,738,900
April	2,914,600	2,797,300
May	2,976,053	2,826,300
June	2,953,908	2,838,300
July	2,950,522	2,917,200
August	3,029,550	2,936,900
September	3,020,308	2,864,000
October	3,038,132	2,842,300
November	3,020,033	2,870,300

* December 1-16.
† December 17-31.

United States Drilling and Production in First Eleven Months of 1936 and 1935

STATE OR DISTRICT	WELLS COMPLETED		BARRELS OF CRUDE PRODUCTION	
	In 1936 (11 Mos.)	In 1935 (11 Mos.)	In 1936 (11 Months)	In 1935 (11 Months)
Arkansas	83	117	9,806,800	10,225,950
California	1,051	1,009	196,732,509	186,805,320
Colorado	18	10	1,529,150	1,438,000
Eastern States	2,767	2,202	36,456,000	35,120,900
Kansas	1,546	1,205	51,334,350	48,561,800
Louisiana	915	654	73,127,600	45,170,050
North Louisiana	521	272	24,231,450	8,390,150
South Louisiana	394	382	48,896,150	36,779,900
Michigan	709	532	11,227,650	14,269,100
Montana	178	152	5,140,750	3,898,300
Nebraska	1	.....	.....	.....
New Mexico	521	266	23,857,650	17,418,900
Oklahoma	2,633	2,060	182,598,000	166,232,600
Southeastern States	12	19	.....	.....
Texas	11,516	10,522	380,396,900	344,744,900
East Texas	2,721	3,914	146,544,600	147,492,450
East Central Texas	215	219	18,887,850	16,307,150
North Texas	2,004	1,965	20,040,100	19,465,050
South Texas	3,067	1,721	30,550,800	19,996,700
Texas Gulf Coast	1,047	1,004	77,508,400	61,805,700
Texas Panhandle	602	591	20,537,600	19,692,950
West Texas	1,424	722	57,363,950	51,456,400
West Central Texas	436	386	8,963,600	8,528,500
Wyoming	86	63	12,799,950	12,097,500
Total United States	22,036	18,841	985,007,309	885,983,320

on crude production lately have been partially lifted, and that the future promises either stationary or increasing stocks, in contrast with the steadily diminishing inventories of the past. While stocks were coming down the market position was being strengthened constantly. In the future, apparently, the markets will not have that encouraging influence. Instead of being watched for further decreases that might bring price improvement, the stocks probably will be watched for possible important increases that might impair the price structures.

Stocks May Increase

The present national proration program does not contemplate further reductions of stocks, and presumably, no further important withdrawals will be made, or even attempted.

If the stocks are henceforth held around the present proportions, the markets quite likely will remain firm.

But if the still persisting pressure for higher allowables results in substantially increasing stocks in the future, the markets quite conceivably may become unsteady.

Recent developments have indicated that increasing crude stocks may materialize shortly. The Bureau of Mines was prevailed upon nearly two months ago to cease allowing for further storage withdrawals in recommending crude production allocations. But still the November allocations were greatly exceeded. The December allocations are being exceeded to an even greater extent, under the allowables fixed in the different states. Furthermore, the states became more open as well as more acquisitive in disregarding the December allocations. Texas fixed an allowable 56,000 barrels daily above the federal allocation and probably will show an actual excess even larger by a considerable extent. Kansas and New Mexico drifted farther from the bureau schedule, and Oklahoma was expected to take similar action. Meanwhile, Louisiana and California continued their aloofness from the Bureau of Mines ideal.

December unquestionably has brought a material slackening of the restraint on crude production, and it remains to be seen what the market effect will be.

Consequently, there are real grounds for a conservative or even questioning attitude toward the markets and toward the contemplated crude price increases.

If the old conditions of diminishing stocks and sacrificial production control still existed, along with the currently improved product prices, there would be greater assurance that crude prices would be stable at higher levels. But under the new conditions of loosened production control and prospective stationary or increasing stocks, there is naturally less confidence in the soundness of higher prices.

Higher Crude Prices Likely

It seems quite likely, nevertheless, that a crude price increase of some extent will be generally adopted soon after the beginning of the new year.

Already, there has been further improvement of tank car and retail prices of products in anticipation of higher costs of the raw material, and these and subsequent gains perhaps would fully justify the posting of higher crude prices.

Ultimately, however, the soundness of all the price advances will depend on the future success or failure in balancing crude production with requirements. The prices cannot be stable at the increased levels unless crude production control continues reasonably effective.

If crude prices are increased, the responsibility of holding down production will be greater than before.

A circumstance that increases the danger of too much crude production

Excesses of Average Daily Crude Production Above Bureau of Mines Recommendations

(Barrels Daily)

Note: Production figures are from American Petroleum Institute Reports.

MONTH	California	Kansas	Louisiana	New Mexico	Oklahoma	Texas	Other States	United States
March, 1936:								
Production	566,510	147,600	191,232	60,532	515,484	1,111,194	236,198	2,828,750
Demand	538,800	142,000	151,400	49,300	506,300	1,104,000	247,100	2,738,900
Excess	27,710	5,600	39,832	11,232	9,184	7,194	*10,902	89,850
April, 1936:								
Production	572,671	153,600	210,642	63,692	550,170	1,145,953	217,872	2,914,600
Demand	552,600	146,000	160,900	63,200	525,000	1,122,800	226,800	2,797,300
Excess	20,071	7,600	49,742	492	25,170	23,153	*8,928	117,300
May, 1936:								
Production	576,643	156,679	228,040	74,600	546,182	1,163,460	230,449	2,976,053
Demand	544,000	150,100	170,500	65,900	538,300	1,132,500	225,000	2,826,300
Excess	32,643	6,579	57,540	8,700	7,882	30,960	5,449	149,753
June, 1936:								
Production	578,240	145,922	222,427	73,033	549,765	1,152,873	231,648	2,953,908
Demand	535,500	153,100	175,700	68,300	552,500	1,125,700	227,500	2,838,300
Excess	42,740	*7,178	46,727	4,733	*2,735	27,173	4,148	115,608
July, 1936:								
Production	574,855	153,251	229,968	74,005	543,822	1,142,690	231,931	2,950,522
Demand	550,800	164,200	186,800	69,400	569,800	1,146,500	229,700	2,917,200
Excess	24,055	*10,949	43,168	4,605	*25,978	*3,810	2,231	33,322
August, 1936:								
Production	578,039	161,779	234,369	77,947	575,421	1,166,564	235,431	3,029,550
Demand	550,000	166,500	188,500	70,100	575,500	1,154,700	231,600	2,936,900
Excess	28,039	*4,721	45,869	7,847	*79	11,864	3,831	92,650
September, 1936:								
Production	576,240	163,557	236,353	78,995	571,297	1,157,593	236,273	3,020,308
Demand	535,200	160,000	186,200	71,600	563,000	1,123,900	224,100	2,864,000
Excess	41,040	3,557	50,153	7,395	8,297	33,693	12,173	156,308
October, 1936:								
Production	579,432	161,311	233,893	80,827	566,716	1,181,800	234,153	3,038,132
Demand	535,300	155,000	189,300	74,200	559,900	1,106,900	221,700	2,842,300
Excess	44,132	6,311	44,593	6,627	6,816	74,900	12,453	195,832
November, 1936:								
Production	584,013	160,772	233,785	83,432	566,258	1,151,233	240,540	3,020,033
Demand	549,600	154,500	198,600	75,600	558,400	1,109,300	224,300	2,870,300
Excess	34,413	6,272	35,185	7,832	7,858	41,933	16,240	149,733

*Under-production.

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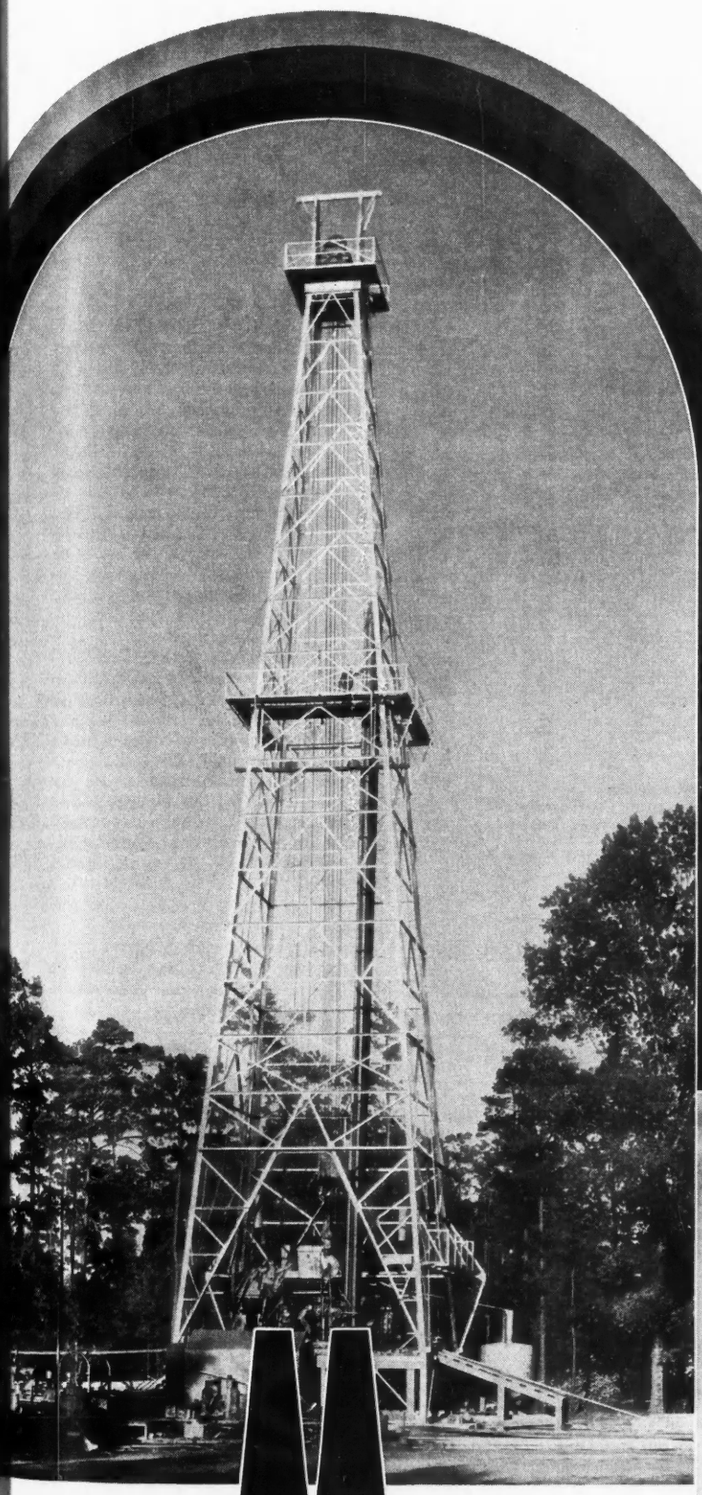

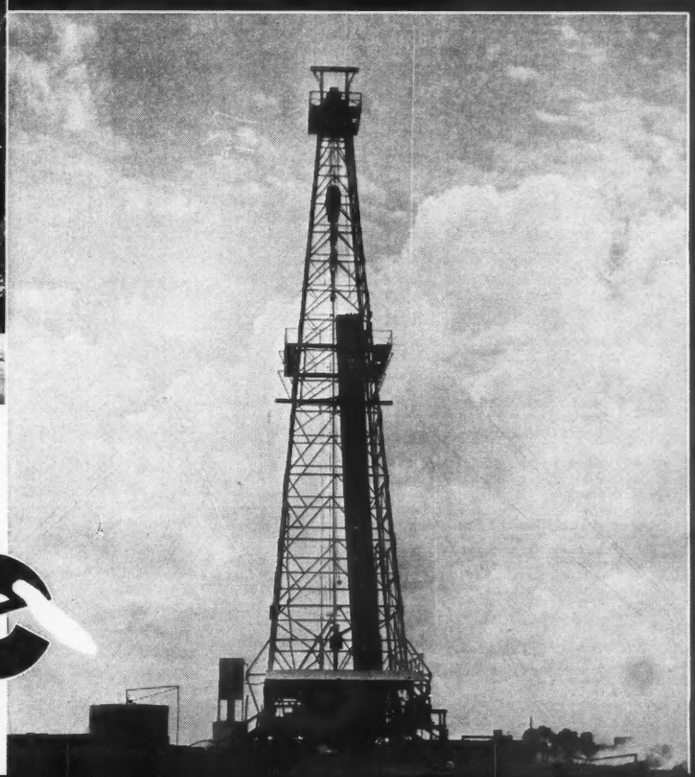

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The rugged reliability of Moore derricks has been proved at the deep test well at Abbeville, Vermilion Parish, Louisiana (right) and the deep test well in Webster Parish, Louisiana (left). The derricks shown are 136′ high with 30′ base and have 800,000# safe working capacity.

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is the continued heavy drilling. More wells mean lower allowables for existing wells. The diminishing allowables in turn lead to demands for lifting of proration restraints. The drilling puts constant pressure on the existing proration programs.

During November, drilling continued about the same as in October and fairly close to the peak of the year, which was established in May. Well completions averaged 67.7 daily, compared with 67.8 a day in October. The May peak was 71.9 wells daily.

In the first 11 months of 1936, there have been 22,036 wells completed, or 17 percent more than the 18,841 wells finished in the corresponding period last year.

That increase in drilling has been greater than justified by either petroleum demand or crude oil production. The demand for petroleum has been running this year about 11 percent higher than last year. Crude oil production the first 11 months of 1936 was a little over 11 percent higher than in the similar period last year.

With drilling continuing extensive in December, it is indicated that 1936 field work will comprise approximately 24,000 well completions. That would be a little more than the number completed in 1929, and the largest number since 1926, when 28,995 wells were completed.

Crude Stocks Decrease

The further slackening of the restraints on crude oil production in November was reflected in the trends of stocks. Crude oil stocks of the country decreased about 2,500,000 barrels. For about six months previously, the stocks had been diminishing from 4,000,000 to 7,000,000 barrels a month.

In December, the storage withdrawals apparently will be further reduced or eliminated, under the more liberal allowables.

The nation's crude stocks stood at 288,630,000 barrels on November 28, according to the Bureau of Mines. They had totaled 291,040,000 barrels on October 31.

The crude oil inventories at the end of November were the smallest since early 1924, or for about 13 years. Since demand now is much greater than in former years, the present crude stocks are at the lowest level for an even greater length of time, in terms of days' supply.

In actual quantity, the present stocks of all oils, crude and refined, are the lowest since late 1926, or for 10 years. Expressed in days' supply, the current stocks of all oils are the smallest since late 1920, or for 16 years. At the end of September, the total stocks aggregated 532,480,000 barrels, or 146 days' supply, at current rates of consumption.

Gasoline Storage Reduced

Although finished gasoline inventories began to increase after December 1, they showed a net decrease of about one-half million barrels in November. Reports to the American Petroleum Institute showed that the reporting companies on November 28 had on hand 47,879,000 barrels of finished gasoline. They had reported an aggregate of 48,579,000 barrels on October 31, and by November 21 the total contracted to 47,213,000 barrels, the smallest amount of the year, after which inventories began increasing. By December 5 the total stood at 48,487,000 barrels.

The 47,897,000 barrels on hand November 28 compared with 43,190,000 barrels on hand November 30, 1935. That was an increase of approximately 11 percent.

Such an increase in gasoline stocks is justified by the gain that has occurred in the gasoline demand. In the first nine months of 1936 the gasoline demand ran a little over 11 percent higher than in the similar period of last year.

Wells Completed in the United States

(Including Oil Wells, Gas Wells, and Dry Holes)

MONTH	Daily Average
January, 1933	30.0
February	30.6
March	26.6
April	25.5
May	25.6
June	21.1
July	23.1
August	30.7
September	36.5
October	40.9
November	46.9
December	47.7
January, 1934	39.7
February	38.1
March	40.6
April	44.0
May	50.7
June	51.5
July	53.6
August	51.3
September	43.2
October	49.6
November	49.9
December	48.3
January, 1935	47.9
February	49.6
March	48.8
April	58.5
May	63.6
June	58.6
July	60.9
August	62.8
September	57.9
October	57.1
November	55.2
December	54.2
January, 1936	52.4
February	51.6
March	60.6
April	69.2
May	*71.9
June	70.9
July	66.6
August	70.4
September	65.4
October	67.8
November	67.8

*** Highest since July, 1930, when completions averaged 76.6 daily. Average dropped in August, 1930, to 52.4 and remained below that figure until July, 1934.**

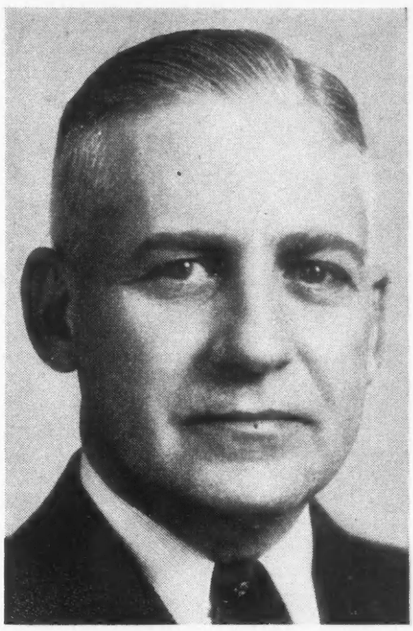
United States Drilling and Production, November, 1936, and Cumulative for Year

STATE OR DISTRICT	MONTH OF NOVEMBER, 1936						CUMULATIVE, JANUARY THROUGH NOVEMBER, 1936					
	*Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	Total Bbls. Oil Prod.	Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	Total Bbls. Oil Prod.
Arkansas	5	....	....	5	.....	834,500	83	17	3	63	6,179	9,806,800
California	114	73	....	41	34,440	17,520,400	1,051	731	12	308	345,325	196,732,509
Colorado	5	2	2	1	2,800	123,350	18	8	2	8	5,971	1,529,150
Eastern States	244	92	102	50	2,031	3,402,200	2,767	845	1,192	730	21,113	36,456,000
Illinois	....	....	....	....	.....	.....	4	.....	4	....	.....	.....
Indiana	5	....	4	1	.....	.....	165	31	57	77	868	.....
Kentucky	20	14	....	6	790	.....	253	171	7	75	10,327	.....
Ohio	192	68	85	39	1,184	.....	1,776	506	784	486	8,903	.....
West Virginia	27	10	13	4	57	.....	569	137	340	92	1,015	.....
Kansas	190	144	5	41	150,164	4,823,150	1,546	1,108	53	385	1,123,474	51,334,350
Louisiana	82	57	6	19	53,808	7,013,550	915	605	112	198	1,239,718	73,127,600
North Louisiana	42	30	5	7	41,495	2,323,100	521	339	102	80	1,087,675	24,231,450
South Louisiana	40	27	1	12	12,313	4,690,450	394	266	10	118	152,043	48,896,150
Michigan	65	23	17	25	2,454	889,950	709	304	192	213	50,515	11,227,650
Montana	33	15	4	14	1 087	550,700	178	126	17	35	11,873	5,140,750
Nebraska	1	....	....	1	.....	.....	1	.....	....	1	.....	.....
New Mexico	49	47	1	1	62,224	2,502,950	521	482	13	26	814,019	23,857,650
Oklahoma	261	178	12	71	297,207	16,987,750	2,633	1,847	118	668	3,839,884	182,598,000
Southeastern States	3	....	1	2	.....	.....	12	.....	1	11	.....	.....
Alabama	....	....	....	....	.....	.....	2	.....	....	2	.....	.....
Florida	1	....	....	1	.....	.....	2	.....	....	2	.....	.....
Mississippi	2	....	1	1	.....	.....	8	.....	1	7	.....	.....
Texas	1,302	980	38	284	1,410,412	34,537,000	11,516	8,693	332	2,491	13,047,122	380,396,900
East Texas	291	268	2	21	1,007,538	13,260,150	2,721	2,552	5	164	9,153,995	146,544,600
East Central Texas	19	14	2	3	26,725	2,149,500	215	151	12	52	367,706	18,887,850
North Texas	247	140	....	107	20,536	1,944,050	2,004	1,112	6	886	149,757	20,040,100
South Texas	344	248	11	85	105,112	5,025,300	3,067	2,286	94	687	1,122,444	30,550,800
Texas Gulf Coast	110	90	2	18	29,164	4,745,200	1,047	757	32	258	308,855	77,508,400
Texas Panhandle	63	45	16	2	19,777	1,872,350	602	432	143	27	231,728	20,537,600
West Texas	183	158	1	24	200,261	4,526,500	1,424	1,214	15	195	1,698,036	57,363,950
West Central Texas	45	17	4	24	1,299	1,013,950	436	189	25	222	14,601	8,963,600
Wyoming	14	10	1	3	2,317	1,415,500	86	63	7	16	47,843	12,799,950
Total United States	2,368	1,621	189	558	2,018,944	90,601,000	22,036	14,829	2,054	5,153	20,553,054	985,007,309

*November completions cover not the calendar month but the five weeks, or 35 days, ended November 28.

Charenton Purchase

BY PAN AMERICAN FURTHER STRENGTHENS ITS POSITION



E. R. Turner entered the oil business in 1914 as a member of the comptroller's department of The Texas Company, Houston. He advanced steadily, becoming one of the company's production executives in the Tulsa office before leaving to join Continental Oil Company in 1929 as assistant to the vice president in charge of production. He resigned to become manager of Pan American Production Company in 1935.

HOUSTON.

CONSUMATION December 7 of a deal whereby Pan American Production Company obtained 50 percent interest and operating control of most of the recently discovered Charenton field in South Louisiana from Mike Hogg, Harry Hanszen, Perry Scranton and others, climaxes several deals made since the former was organized less than two years ago, indicating that the purchasing company and its parent will occupy a more prominent position in Texas and Louisiana Coastal oil circles in the future.

While the principals refused to announce the consideration involved in the transfer of half interest in the block, it is known that Pan American Production Company did not re-imburse Mike Hogg et al for expenses incurred in assembling the block and drilling the first two tests. It is known, also, that no oil payments are involved, and that the contract involves a clause allowing Pan American Production Company to withdraw in the event certain exploratory (or additional) drilling indicates the Charenton block will not pay off commercially. There is also report of a clause providing that after completion of the thirty-first test Hogg's 50 percent of operating costs is to be paid out of one fourth of the oil produced on the block at Charenton. The 50-50 operating expense agreement applies to general development drilling and lease expenses, but does not necessarily apply to all wells Pan American may see fit to drill. As a matter of fact, it is announced that Pan American expects to bear wholly the expense of drilling certain wells (presumably flank or "step-out" tests).

Acquisition of control and half interest in the 67 leases comprising the 25,592-acre block in St. Mary Parish's most recent discovery, while not giving the purchaser complete control of the field, places it in an eminently better position in the coastal country. The field, centering around Section 30-13s-10e, is strategically located to supply crude to either Pan American Refining Company's plant at Texas City, Texas, or to the affiliated company's plant at Destrahan, Louisiana, whichever market and economic conditions dictate. Charenton, a geophysical prospect was discovered by Lawes Realty 1 completed by Hogg, Harry Hanszen et al, July 6 from Miocene sand at 7195 to 7210 feet for an initial hourly flow of 21 barrels through a five-sixteenths-inch choke. Initial tubing pressure was 575 pounds. The oil is 34.9 corrected gravity.

Charenton, however, is only the latest in a string of several deals put over by Ed Royal Turner to increase the prestige of his company in the coastal country. Starting from scratch in July, 1935, he has built up a daily average production of 2000 barrels in The Texas Coast and Southwest Texas, not to mention 600 barrels daily in Southern Louisiana. A fairly good "potential" apparently has been put on his takings, for Pan American Refining Company's plant at Texas City, now operating at 38,000 barrels per day, is a bee hive of industry with construction work needed in connection with doubling the capacity of the refinery and installing a polymerization unit.

Many have asked why Standard Oil Company of Indiana, parent company of Stanolind Oil & Gas Company and controlling 87½ percent of the stock in Pan American Petroleum & Transport Company, which latter is the 100 percent parent company of Pan American Production Company, sees fit to have two producing subsidiaries apparently in competition with each other in the Gulf Coast. The question may be answered with the following explanation:

Any oil Pan American Refining Company might purchase from Stanolind Oil & Gas Company would be purchased on the same basis that oil bought in the open market might be purchased, or at posted prices just as though Pan American Refining Company had purchased the crude from Gulf Oil Corporation, Humble Oil

[*Continued on page 54*]

Richfield Merger

APPROVAL PROVIDES FOR A LARGE INTEGRATED CONCERN

LOS ANGELES.

WHEN the United States District Court in Los Angeles approved Consolidated Oil Company's proposed reorganization of Richfield Oil Company and its subsidiary, Pan American Petroleum Company, through a merger with Rio Grande Oil Company (THE OIL WEEKLY, December 7), another important concern came under the wing of Harry F. Sinclair. The new company will be known as Richfield Oil Corporation, and will have ample capital, large gasoline distributing facilities, refining and pipe line units, a fair amount of production and undeveloped holdings. Richfield has been in receivership five years, but is expected to return to activity at once.

The plan approved provides for amalgamation of Richfield Oil Company, Pan American Petroleum Company and other Richfield subsidiaries with Rio Grande Oil Company by a transfer of assets and securities to the new corporation. Since Cities Service Oil Company recently exchanged its holdings in Richfield Oil Company and Pan American Petroleum Company for stock in Rio Grande Oil Company, owned by Sinclair's Consolidated Oil Company, both Cities Service Oil Company and Consolidated will be interested in the new concern.

The new company will have four refineries, all in California, with a combined daily charging capacity of 107,000 barrels. Three of the plants are former Richfield Oil Company units, and the fourth belonged to Rio Grande Oil Company.

The new concern also will have eight natural gasoline plants with a total capacity of approximately 70,000,000 cubic feet of gas daily. However, several of the plants are located in fields where the gas supply is about depleted and they have been shut down.

Pipe line facilities primarily consist of a 10-inch system extending from Elk Hills to the Los Angeles harbor, complete coverage of the Los Angeles Basin fields, and a submarine loading

[*Continued on page 54*]

YOUR MONEY'S WORTH

NATIONAL Seamless CASING FROM BRIDGEPORT

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Experienced operators know too that Bridgeport gives them their money's worth in an extremely useful pipe delivery service—a service that gets the material on the job when it is wanted—a service that takes care of every detail from the time the order is placed until the material has served its usefulness—a service that brings the lowest competitive price, liberal terms, quick car-load or out-of-stock deliveries — service that is thorough, pleasing and convenient.

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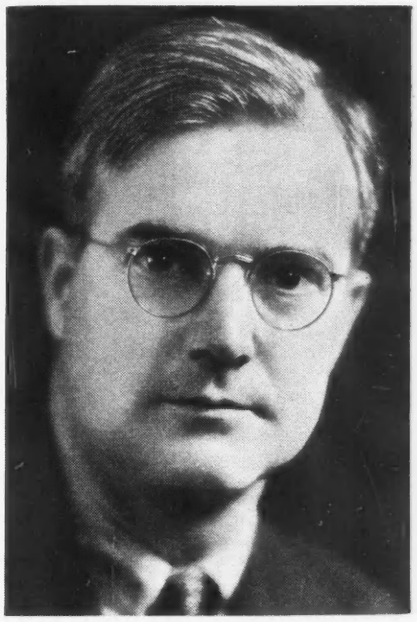
MEN IN THE INDUSTRY'S NEWS

EMPIRE OIL & REFINING COMPANY MAKES A. F. MORRIS CHIEF GEOLOGIST AND ROBERT L. KIDD HIS ASSISTANT

A. F. MORRIS



ROBERT L. KIDD

THEY WILL FILL THE VACANCY CAUSED BY RESIGNATION OF J. M. NISBET

A. F. Morris has been appointed chief geologist of Empire Oil & Refining Company, effective January 1, 1937, and Robert L. Kidd has been made assistant chief geologist. These changes fill the vacancy created by the resignation of J. M. Nisbet, it was announced by A. W. Ambrose, vice president and assistant general manager.

Morris was graduated from the University of Oklahoma in 1918, and has been in geological work in the Mid-Continent area since that time. He joined the geological staff of Empire Oil & Refining Company in October, 1924, to do subsurface work. In 1929, he became assistant chief geologist, a position he held until his new promotion.

Kidd is a graduate of the University of Indiana in 1923. He joined Empire Oil & Refining Company in 1925, and went to work in the Oil Hill (Kansas) district office as an assistant geologist. Afterwards, he succeeded John R. Reeves as district geologist there. In 1930, he was transferred to the Bartlesville office of the company as assistant to C. O. Hoffman, in charge of geological work for Cities Service Gas Company. In 1933, Kidd was transferred to geophysical work.

J. C. Kennedy continues as head of the land department.

H. K. V. TOMPKINS, vice president of George F. Getty, Inc., Los Angeles, has been placed in charge of a new Southwest district office established last week in the Trinity Life building, Fort Worth. Affiliated companies include the George F. Getty Oil Company, Minnehoma Oil Company and Pacific Western Oil Company. The Getty interests have production in New Mexico, Oklahoma and Kansas, and are launching a drilling program in West Texas.

DANA HOGAN, president of Hogan Petroleum Company, will be chairman of the Wildcat Committee of the California Oil and Gas Association for the coming year, following an election just held by the committee. He will be assisted by Frank Morgan, vice president of Rio Grande Oil Company, who will be vice chairman, and by J. R. Pemberton, oil umpire of California, who will be treasurer. The Wildcat Committee, which is the live wire group of the association, is now completing plans for its annual climax to the oil industry social season, the Christmas Jinks and Banquet. Scheduled for the Biltmore Bowl, Los Angeles, on December 18, this affair is expected to attract guests from every oil section of the state. As usual, the main feature of the evening will be an original play, satirizing the foibles of the industry and acted by members of the Wildcats.

LELAND W. JONES with Ohio Oil Company in the Edmond district has been elected president of the Oklahoma City Geological Society. He succeeds Roland Laughlin. E. A. Paschal, of Coline Oil Company, was elected vice president, and Harry E. Crockett, consulting geologist, secretary-treasurer.

The Oil Man's Calendar

DEC. 15	Mid-Continent Oil & Gas Association, Annual Meeting of General Board of Directors, Tulsa, Oklahoma. California Oil & Gas Association, Annual Christmas Party of Wildcats, Biltmore Hotel, Los Angeles.
JAN. 16–24	First International Consumers Petroleum Exposition, Detroit, Michigan.
FEB. 15–19	American Institute of Mining and Metallurgical Engineers, New York
MAR. 17–19	American Association of Petroleum Geologists, Los Angeles, California.
APR. 8–10	Petroleum Industry Electrical Association, Shreveport, Louisiana.
15–16	National Petroleum Association, Cleveland, Ohio.
MAY 10–16	American Gas Association, Natural Gas Department, Kansas City, Missouri.
JUNE 1–3	American Petroleum Institute, Mid-Year Meeting, Colorado Springs, Colorado.

DOUGLAS A. CAMPBELL, lately of Ploesti, Rumania, who has spent several years in the production departments of European subsidiaries and affiliates of Standard Oil Company of New Jersey in Rumania, Italy, Poland and Germany, is enroute Venezuela, where he will be employed in the production department of Lago Petroleum Corporation.

HOWARD D. ATHA, Gordon Oil Company; W. B. Pardoe; W. A. Thomas, McClanahan Oil Company; C. A. Smith, Jr., Smith Petroleum Company; Fred W. Turner, Turner Oil Company; A. E. Butterfield, attorney; George B. Talbot, Talbot Oil Company; C. L. Maguire, Roosevelt Refining Company; Dr. Virgil R. D. Kirkham, independent geologist; T. E. Cain, Nolem Oil & Gas Company, and W. P. Clare, Gulf Refining Company, were elected directors of the Oil & Gas Association of Michigan December 7.

FRANK R. CLARK, vice president of Ohio Oil Company, Tulsa, married Natalie Carter Broach on November 21. They will be at home in Tulsa after December 15.

BLAINE B. WESCOTT, Gulf Research & Development Company, Pittsburgh, Pa., has been appointed chairman of the American Petroleum Institute's Division of Production Central Committee on Drilling and Production Practice in 1937. John T. Hayward, Barnsdall Oil Company, Tulsa, is the 1937 vice chairman, and Carl A. Young, American Petroleum Institute, is secretary. The following

chairmen, of Topical Committees, under the Central Committee on Drilling and Production Practice, have been appointed: Drilling Practice, Carl E. Reistle, Jr., Humble Oil & Refining Company, Houston; Production Practice, B. H. Robinson, General Petroleum Corporation of California, Los Angeles; Production Technology, H. H. Power, University of Texas, Austin; Materials, C. W. Froome, Union Oil Company of California, Santa Fe Springs, Calif.

B. F. PICKARD, Utilities Power and Light Corporation, has been made vice president and general manager of the Central States Light and Power Corporation, Tulsa, and has also been made acting vice president and general manager of the Laclade Gas Company of St. Louis, Missouri. He will handle both jobs until the final reorganization of the Laclade company.

T. A. HENDRICKS, United States Geological Survey, spoke before a meeting of the Tulsa Geological Society, December 7 on "Stratigraphy of Pre-Pennsylvanian of Black Knob Ridge in Southeastern Oklahoma." Hendricks addressed the group two years ago on the subject of Pennsylvanian coals and sediments in the McAlester-Arkansas river basin. He has been on a detailed survey of southeastern Oklahoma for the past several months.

M. ALBERTSON, Shell Petroleum Corporation research engineer, Houston, has been appointed chairman of a Study Committee on Well Spacing by the American Petroleum Institute Division of Production.

F. H. BROOKS, president of Northern Natural Gas Company, has been in the Panhandle district making his annual inspection of properties.

P. C. MURPHY, division head of Phillips Petroleum Company in the Shreveport territory, and chairman of the Rodessa Operators Committee, attended a meeting of company officials last week at Bartlesville, Oklahoma.

E. L. GREEN, JR., has resigned as supervisor of the Gulf Coast district for the Texas Railroad Commission to accept employment with The Cabot Companies at Pampa, Texas. His resignation is effective December 15. He has been with the commission since February, 1931. In 1934 he was placed in charge of the Panhandle district and came to Houston in July 1935.

S. P. TSCHAPPAT, general manager of Hercules Tool Company of Tulsa, has completed an extensive business trip through Eastern fields. While away he visited at points in Pennsylvania, Ohio, West Virginia.

EDGAR D. KLINGER, San Angelo, Texas, consulting geologist, has been appointed chief geologist for Lion Oil Refining Company, El Dorado, Arkansas, succeeding Malcolm E. Wilson, who resigned last July to become vice president and director of the General American Oil Corporation, Shreveport. Klinger has resided in West Texas for the past 10 years, except for 2 years spent in making a geological survey for Cities Service Company in the Rocky Mountain and West Coast states. Lion Oil Refining Company has lately become active in acquiring leases in West Texas.

JAMES ANDERSON, Humble Oil & Refining Company, was re-elected president of the Houston Chamber of Commerce and W. L. (Bert) Childs, Reed Roller Bit Company, was elected vice president in a meeting held December 10.

Helped Set Record

One tour of the crew which drilled the first 10,000-foot test in Texas Gulf Coast and also discovered, last week, a new gas field with possibilities of oil production for Shell Petroleum Corporation at Hitchcock, Galveston County. From left to right: Jack Clark, helper; Carl English, derrick man; Albert Beridge, helper; Bill Bailey, driller and Sam Bailey, fireman.

DAN WILLIAMS, JR., petroleum engineer for Magnolia Petroleum Company, has been transferred from Rodessa to Longview and will divide time on the company's operations in the Talco and East Texas fields. He will also continue the engineering work attached to the repressuring of the Bull Bayou field, Louisiana.

COLONEL R. C. KULDELL, Houston, president of Hughes Tool Company, December 10 was elected to the board of directors of the National Association of Manufacturers at its forty-first annual convention in New York.

RUBE COTULLA, San Antonio, has resigned from the geological department of Windsor Oil Company, to enter the consulting field.

ANDRES ROZLOSNIK, mining engineer with Yacimientos Petroliferos Fiscales, Buenos Aires, Argentina, was a recent visitor in Houston.

R. A. CATTEL, chief of the Bureau of Mines petroleum and natural gas division, has announced that the Bureau of Mines will shortly commence a study of oil and gas ratios in the Texas Gulf Coast area. The survey will be augmented by a study of gas blowouts and means of prevention, he said.

G. W. HOLLAND, head of the conservation department of the United States Bureau of Mines, Washington, visited the Rodessa field last week.

DONALD RICHBERG, once NRA administrator, has resigned as special assistant attorney general of the United States, it was announced by Attorney General Homer S. Cummings December 9. It is understood that Richberg resigned to engage in the practice of law as a partner in a firm handling cases against the government. He was appointed to the department in April, 1935, and reappointed this year to prosecute companies charged with defrauding the Osage Indians of several million dollars in oil royalties. The companies against which he started prosecutions are Carter Oil Company, Sinclair Prairie Oil Company, Stanolind Crude Oil Purchasing Company, Oklahoma Pipe Line Company, Stanolind Pipe Line Company and Sinclair Prairie Pipe Line Company.

C. W. CLAYTON, field foreman, Mexican Gulf Oil Company in the Altamira district, Mexico, is spending a vacation with relatives in Illinois.

DIED:

JAMES J. WEAKLY, chief auditor for Wirt Franklin Petroleum Corporation since 1919, died December 5 at Ardmore following an appendectomy. The body was sent to Falls City, Nebraska, for burial.

RALPH L. GORMLEY, of Tulsa, his wife, and four Kansas oil men were killed December 7, when their cars collided near Carbondale, South of Topeka, Kansas. The others included Jack Farley, Kansas representative for Atlas Supply Company; Sam Wentworth, Hutchinson; Paul B. Vautravers, WPA geologist of Topeka and Dale Ruff, of Manhattan, Kansas. Gormley, 46, was Mid-Continent sales manager for Atlas. He is survived by his mother, Mrs. A. M. Gormley of Tulsa, a son Ralph L. Gormley, Jr. and four brothers and a sister.

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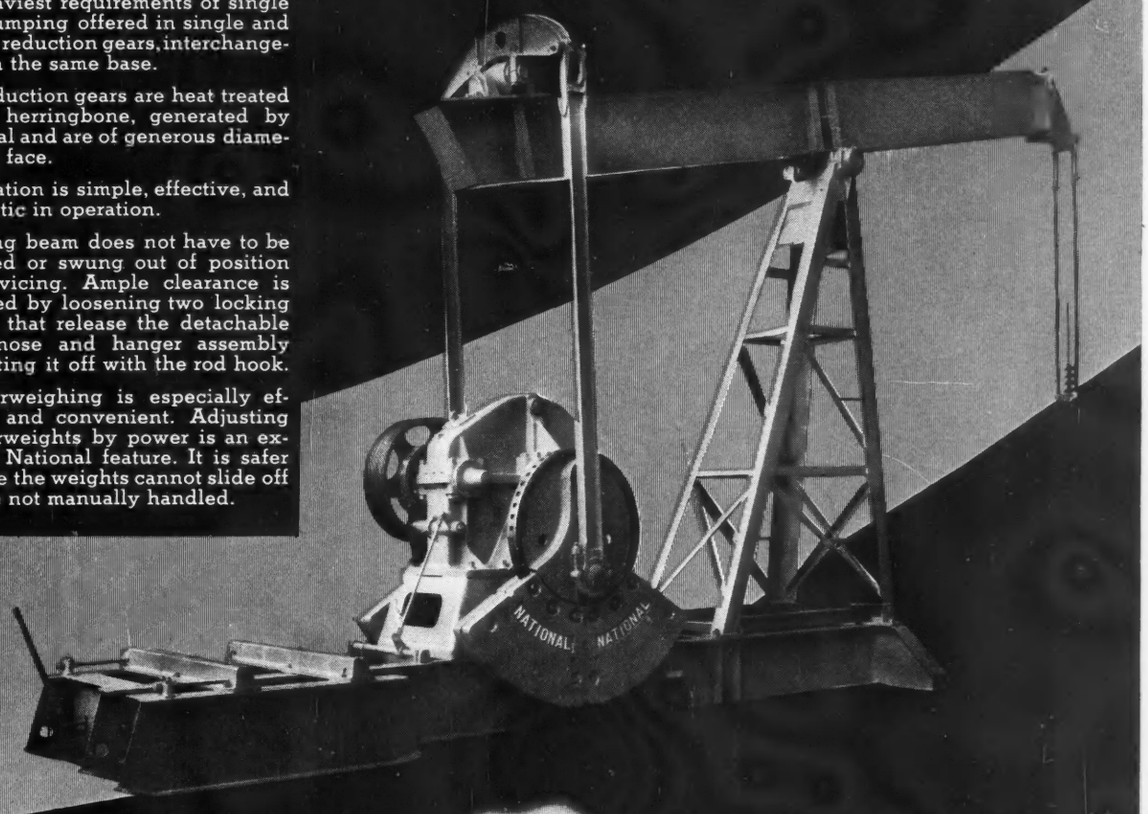

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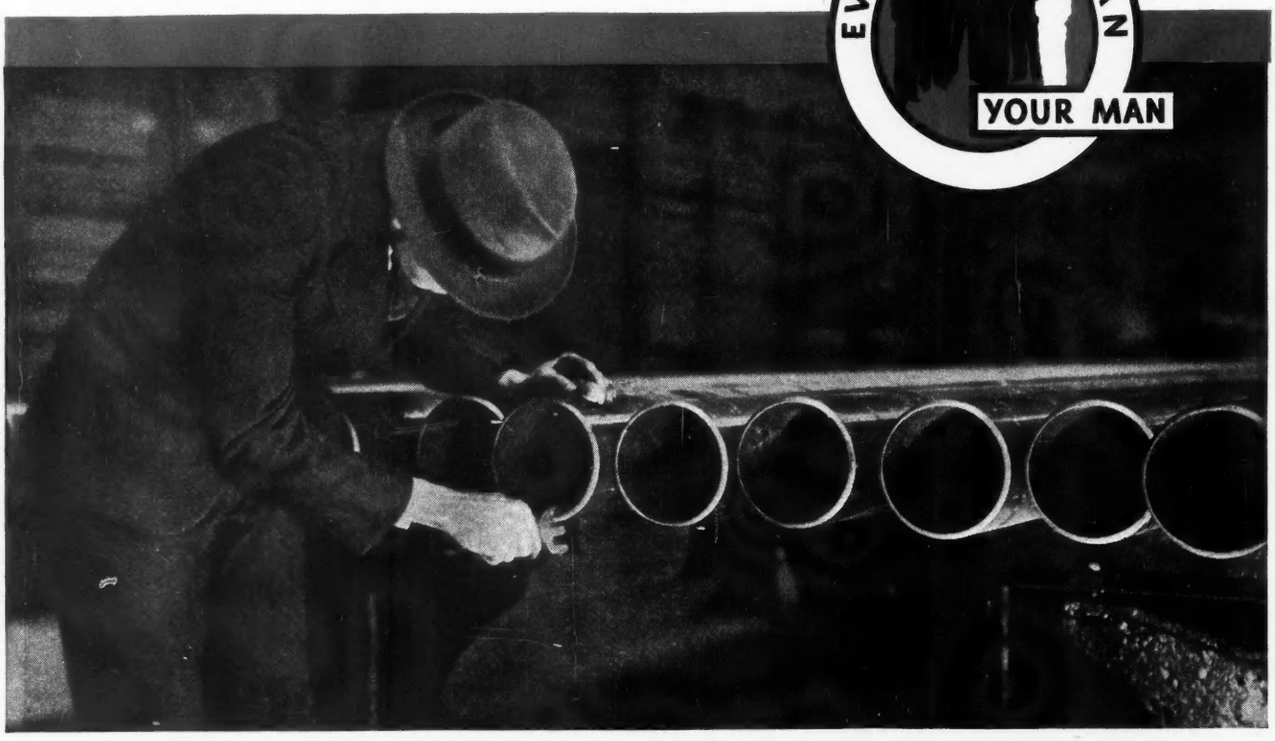

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Floating Checks for Gravity Tanks

WOODEN BALLS DROPPED INTO THE OIL BEING USED IN EAST TEXAS

By ELTON STERRETT, Engineer

WHENEVER a lease tank gravity-flow line is forced to deviate from the theoretical ideal of a continuous down grade from tank bottom to field pump or other receiver, trouble from entrapped air may be expected; its extent and seriousness depending largely upon the care exercised by the men charged with the duty of supervising flow from these tanks.

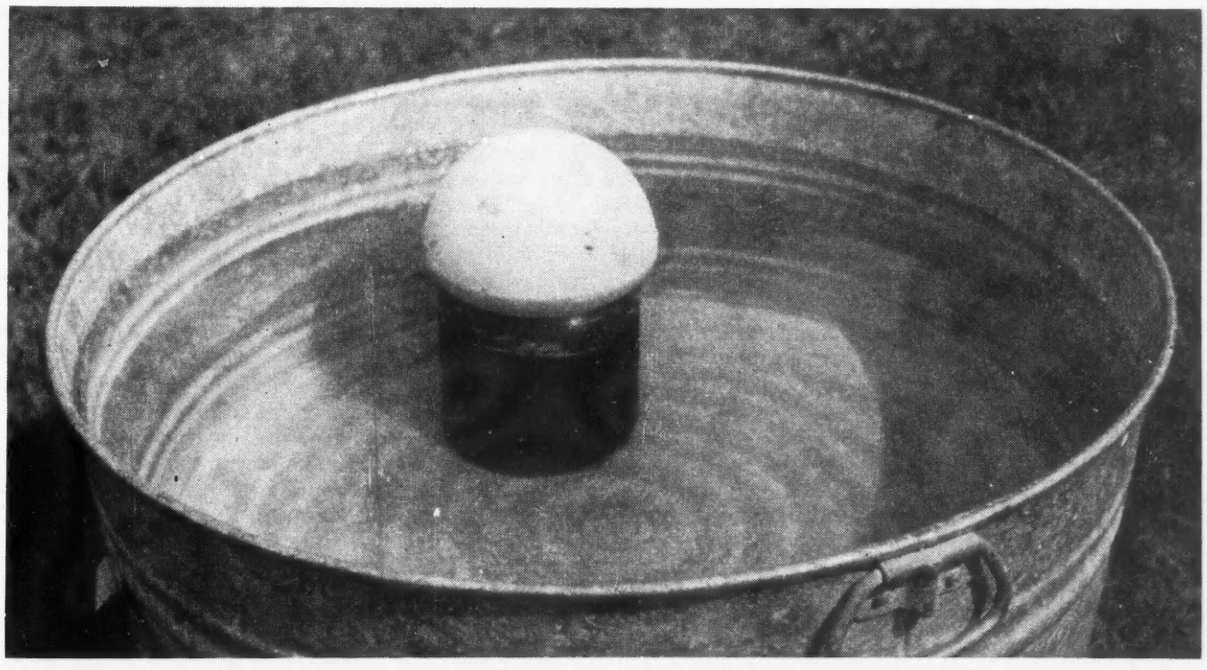
If a lease tank be permitted to drain until the top of the riser on the outflow line is exposed, air and gases from the tank naturally are drawn into the line, following the receding surface of oil until the flow is cut off or until the line becomes filled with air.

Upon attempting to start flow the next time the tank is put on the line, this air moves ahead of and around the oil stream, pocketing in the high spots and acting as effectively as a manually-closed gate to stop gravity flow of oil; or, if the hydrostatic head be sufficient to compress this entrapped air into a portion of the pipe cross section at the apex of the "hump" in the line, the normal flow is throttled and the time required to drain the tank consequently prolonged unnecessarily.

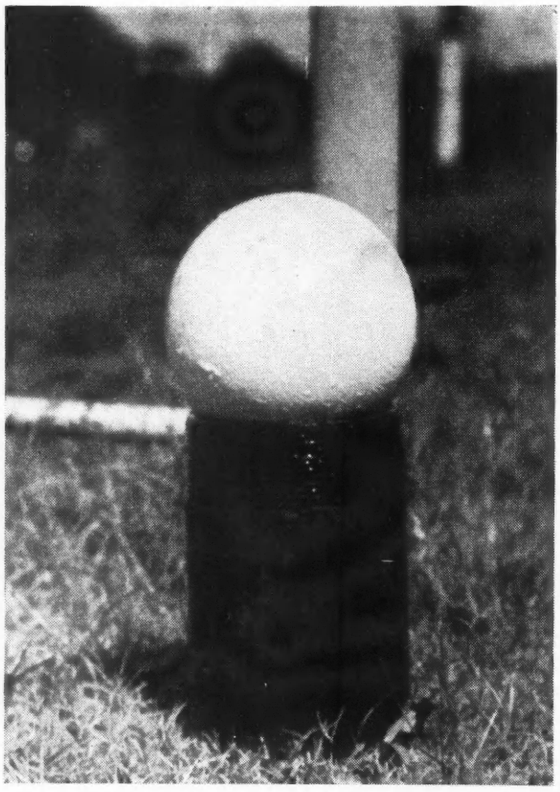
Some producers equip their lines with elaborate devices for automatically closing off the flow line when the oil within a lease tank drops to a predetermined level.

Other companies, accepting the occasional rush of air into gravity lines as inevitable, equip their leads with some type of air-relief valve, held closed as long as oil under the actuating float provides buoyancy to keep the valve closed, but shutting off flow through the line and venting the stub to air when the fluid level is dropped below the set limit.

Several companies have been experimenting with a wholly-automatic device for shutting off flow through the tank gravity line before the oil level has dropped



Ball seated on nipple to show sealing action. The ball is so balanced that buoyancy and seat adhesion are equal. The addition of a cup of water lifts the ball from seat.



Earlier, or five-inch ball on riser nipple, showing effective seal obtained.

enough to permit air to enter. The entire mechanism, if it may be so termed, consists of a wooden ball, dropped into the oil through the gauging hatch, there to float indefinitely.

When flow begins from a tank, there is a natural hydraulic grade established on the surface of the oil, depending upon tank diameter, size of outlet line, and difference in head between tank bottom and receiver or pump. Under the influence of gravity, the wooden ball within the tank tends to work down this slope, and to settle directly at the center of the depression. If, as happens most often in the smaller tanks, the oil begins to whirl as the outflow continues, the centrifugal force set up by this vortex is not great enough to overbalance the gravitational urge of the ball toward the center.

When this depressed center has been lowered, through drainage of tank contents, until there is a minimum of some two inches of oil over the outlet nipple, the ball is drawn down onto the top of the riser, cutting off the flow and sealing the line as neatly and cleanly as could be expected of the most carefully designed ball check.

In a series of tests with such a ball on one of its gravity tanks, one oil producer found by checking end gauges over a period of months that the closing gauge obtained when the ball alone was relied upon to stop the flow varied through less than ¼ inch, which was the limit to which gauging was held on this particular tank.

A five-inch ball was used at first for closing off four-inch riser nipples, but as experience with this floating check was gained it was learned that the margin of buoyancy obtained by the relatively slight area of ball extending beyond the nipple was sometimes inadequate to float the ball free after the tank had again been filled.

Various means for freeing the ball were tried out, including tapping the outlet line and attaching an automobile inner tube valve there, that a tire pump might be used to build up air pressure under the ball and thus lift it free of the adhesive ring of paraffin in which it nestled. When nipple end and ball were both approximately round, this scheme was effective, but if there was a slight irregularity the air escaped into the tank as it was pumped, and the ball continued to adhere tightly to its seat.

A number of mechanical means were tried in attempting to dislodge the ball, such as tapping the bull plug at the tank tee and installing a gland there to pack off around a section of sucker rod which could be used to knock the ball free; fitting a chain actuated trip to a collar with counterbalanced grip dogs which could be assembled within the gauging hatch and worked into position over the nipple with the aid of a pair of long fish poles; and by keeping within the tank a device made of two poles with a spreader brace and a loop of chain at the lower end to act much as a mine sweeper is supposed to in war.

Change of the diameter of the ball from five to six inches for use with a four-inch outflow riser was found to overcome most of the earlier difficulty. Turned from solid cypress, and painted with two or more coats of oil-resistant paint, the ball floats with slightly more than half its surface above the oil, and presents a sealing ring which is nearly enough a flat plane in contact with the riser to obviate the wedging action which with the smaller ball proved so troublesome.

With the larger ball, the only precaution taken by the gauger when he puts on a tank is to give the side wall nearest the riser a kick with his heel in passing. The wavelets thus set in motion through the oil within the tank are sufficiently strong to rock the ball on the pipe—if still seated there—and thus enable oil enough to get below it to permit it to rise to the surface.

So buoyant are these balls that, if released by jarring, as above, the ball will rise clear of the surface by two feet or more, striking the tank top a resounding blow if the oil level within be high enough.

Indiscriminate use of such balls without accurate knowledge of the hook-up within the tank is apt to prove embarrassing, as was the case when one company dropped balls into a battery of lease tanks with the standard four-inch gravity lines, only to learn after the leads had been tightly plugged that the riser, instead of being the usual four-inch nipple, was in each case a 4 x 6-inch swage, into the big end of which the balls dropped easily, to wedge firmly at the reduced section, there to defy all efforts at removal until a resourceful gauger managed to impale each of the trapped floats with a screw eye at the end of a jointed pole.

Regardless of the diameter or capacity of the tank, one ball has been found ample to provide positive shut-off, the motion imparted to the oil which a tank is being filled sufficing to free the ball from the side wall, should it chance to float there and adhere in a tank only partially empty. The formation of a paraffin coating on the ball does not seem to reduce its effectiveness, the fact that the ball is free to revolve in the liquid insuring that the heavy side will be down—and consequently within the riser during a close-off—so that the next paraffin will be deposited where the coat was formerly the thinnest.

With but negligible first cost, the floating ball seems an effective air check where interior conditions of tank and riser permit its use.

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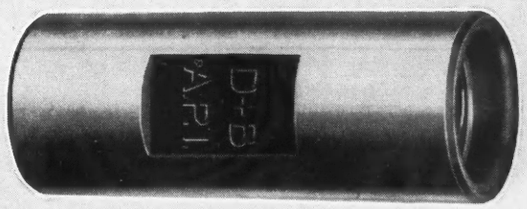

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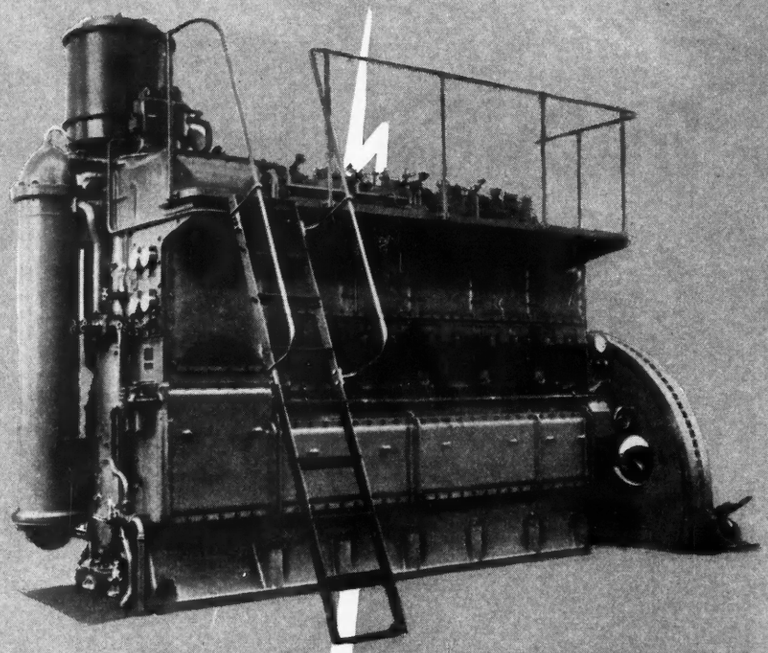
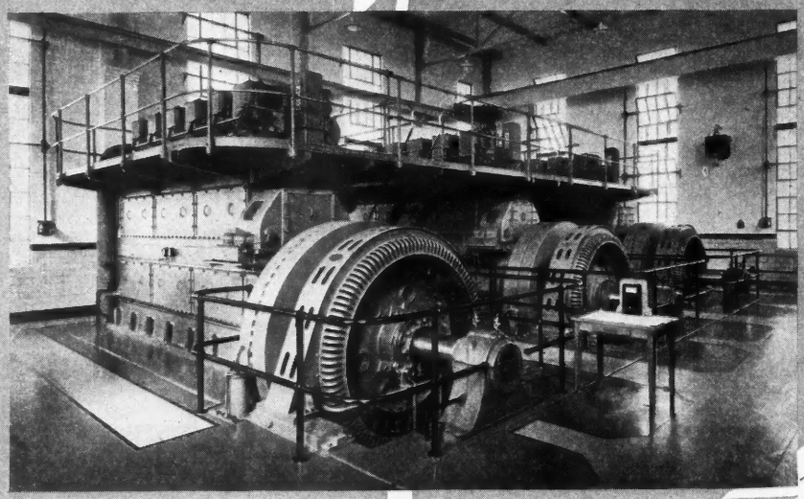


Above—Alco-Sulzer 2-Cycle Diesel Engines (Sulzer Brothers, Winterthur, Switzerland). H.P. range—40 to 20,000.

Below—McIntosh & Seymour 4-Cycle Diesel Engines. H.P. range—80 to 8,000.



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Alco products express the character of the builder in the delivery of quality and performance to the buyer. They reflect the aim of a personnel whose unfailing devotion to the cause of service ranks first.

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MANY FACTORS MUST BE CONSIDERED IN DETERMINING WHAT IS EFFICIENT

Well Spacing

By BRAD MILLS, Associate Editor

PART 2

REGARDLESS of the efficacy of the various well spacing programs, the operator must use common sense in handling his own spacing problem. Where one company owns a 40-acre lease that is surrounded by intensely developed leases, it may be necessary to drill twice as many wells as would give the greatest ultimate return on invested capital under more favorable offset conditions. This is especially true where the allowables are based on the number of wells, or on well potentials. If all surrounding leases were drilled to a density of one well to five acres, the operator with a 40-acre lease could hardly afford to be content with one or two wells. It is obvious that the one well could not protect the entire 40-acre tract from drainage by the offset wells, since the constant adjustment of pressure within the formation would work to advantage of offset wells.

Theoretically a well spacing plan could be based on the amount of oil in place under a lease, provided the entire field could be operated to give each operator his exact share of the oil. To give each operator his exact share of the total oil, it is necessary to use either well spacing or well allowables, or both, as factors in the consummation of an equitable plan. Well spacing, potentials and allowables are so involved in an operating program giving an equitable return to every operator, that it seems impossible under present conditions to approach the ideal spacing plan. All sight of the perfect drilling plan must be lost where offset companies have established an intolerable producing condition.

Wide Spacing Successful

In most of the fields where wide spacing has been practiced, the plan has been a success. In such fields as Van, Kettleman Hills, Yates and Conroe, wide spacing has been approved by most of the operators. The pressure decline in all these fields except Kettleman Hills has been slow. Unsound production practices at Kettleman Hills have been responsible for the sharp pressure drop in that field, where one well to each 20 acres is the maximum density allowed. The sharp pressure drop in the undeveloped parts of the field, however, indicates that a well affects the producing formation at a great distance from the well.

Although Kettleman Hills has a great thickness of oil sand, the action of the comparatively small number of wells adds weight to the theory that wide spacing offers the greatest opportunity to maintain a good formation pressure. The high recovery from one group of eight wells on a 160-acre lease also furnishes good ammunition for the proponents of close well spacing. The first well completed on this quarter section produced 3,670,000 barrels during the first year. The same well produced almost 5,000,000 barrels in less than two years, after which it was temporarily shut in. There is no doubt that this well drained oil from surrounding leases, other operators claim. If this producer had been given a reasonable allowable, the pressure decline and water intrusion probably would have been less pronounced in this area.

The East Texas field has been used as a shining example by advocates of both close spacing and wide spacing, but it has been difficult to settle arguments by using this field as a basis for comparison. The close spacing proponents point to the field as one that has been sensibly developed, and attempt to prove their claim by calling attention to the performance of the field now and in the past. Advocates of a wide spacing program insist that it would be possible to obtain a daily production of 440,000 barrels from less than 5000 wells, and at a fraction of the expense attending the operation of 22,000 wells. They further claim that 5000 wells would give a greater ultimate recovery of oil than 22,000 or 25,000 wells will give. The wide spacing followers claim that only curtailment in the East Texas field has prevented a pressure drop that would have placed the field on the pump. The close spacing enthusiasts insist that the field as it now stands can only prove that intensive development has not unduly reduced pressures.

It is very interesting to note that recent completions in the East Texas field showed no higher bottom-hole pressures than offset wells that had been producing for a long period. The wide spacing faction points to this development as strong evidence that the field has been fully drilled. It is claimed by engineers inclined toward wide spacing practices that when it becomes impossible to find higher pressure areas that exist around the completed wells, all important sand lenses have been adequately tapped by wells already on production. Bottom-hole pressure tests in a number of wells recently completed by a major operator showed an average pressure within a few pounds of that shown by a group of older producing wells. Such a condition indicates that wells now on production are affecting the formation pressure at all points between producing wells. The drainage question is not necessarily settled by proof that producing wells are affecting formation pressures in undeveloped areas, but it lends

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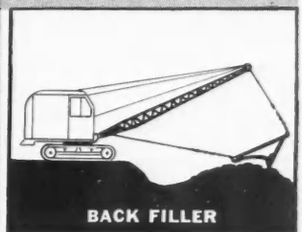
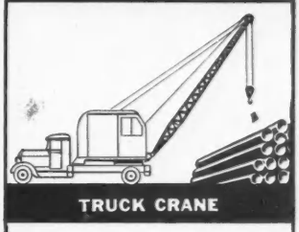
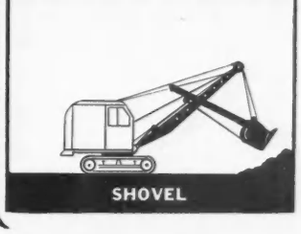


BACK FILLER



TRUCK CRANE



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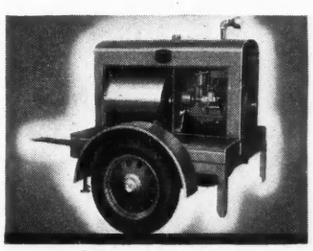

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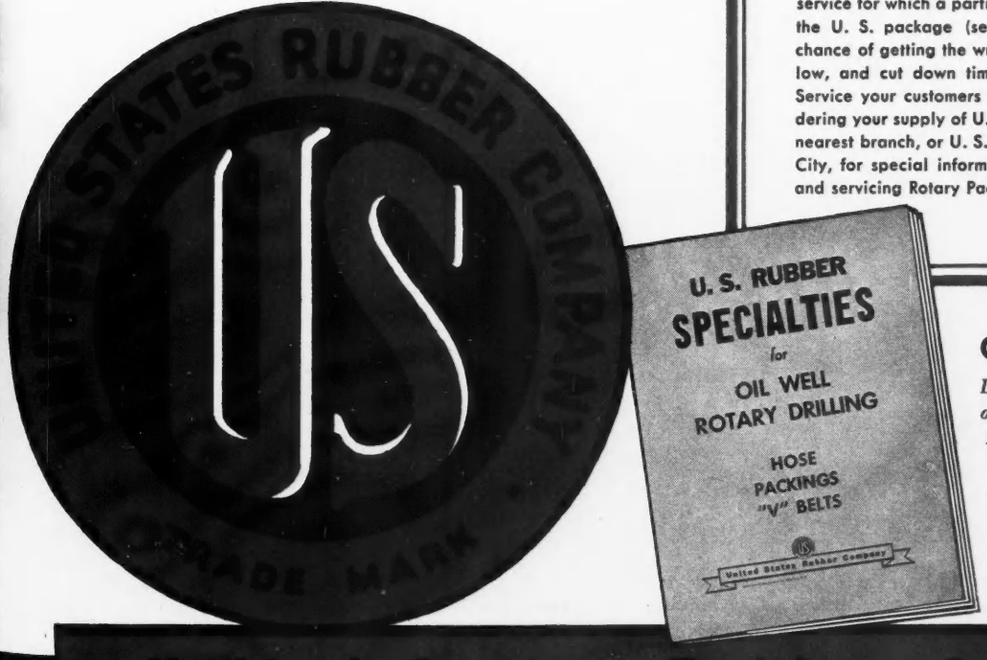

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considerable weight to the claim that a field is fully drilled when no high-pressure areas may be found.

Ultimate Recovery a Question

The question of ultimate recovery may hinge on the action of wells during the last stages of a field. In many low-pressure fields, it is possible that very close well spacing would give the greatest ultimate recovery of oil. This is especially true where the bulk of production would be obtained by fighting for it on the pump. Even in such a field it would be possible to drill more wells than would return a profit, although a high percentage of the oil in place could be obtained.

One well spacing program can not be applied to all fields, and any attempt to apply a single formula will lead to trouble. Fields of different types that contrast sharply should not be developed along similar lines, if maximum recovery of oil is a consideration. The Long Beach, California, and Conroe, Texas, fields are examples of two extreme types of producing structures. In either field it obviously is impossible to prove that another type of spacing program would have been more effective than the one followed.

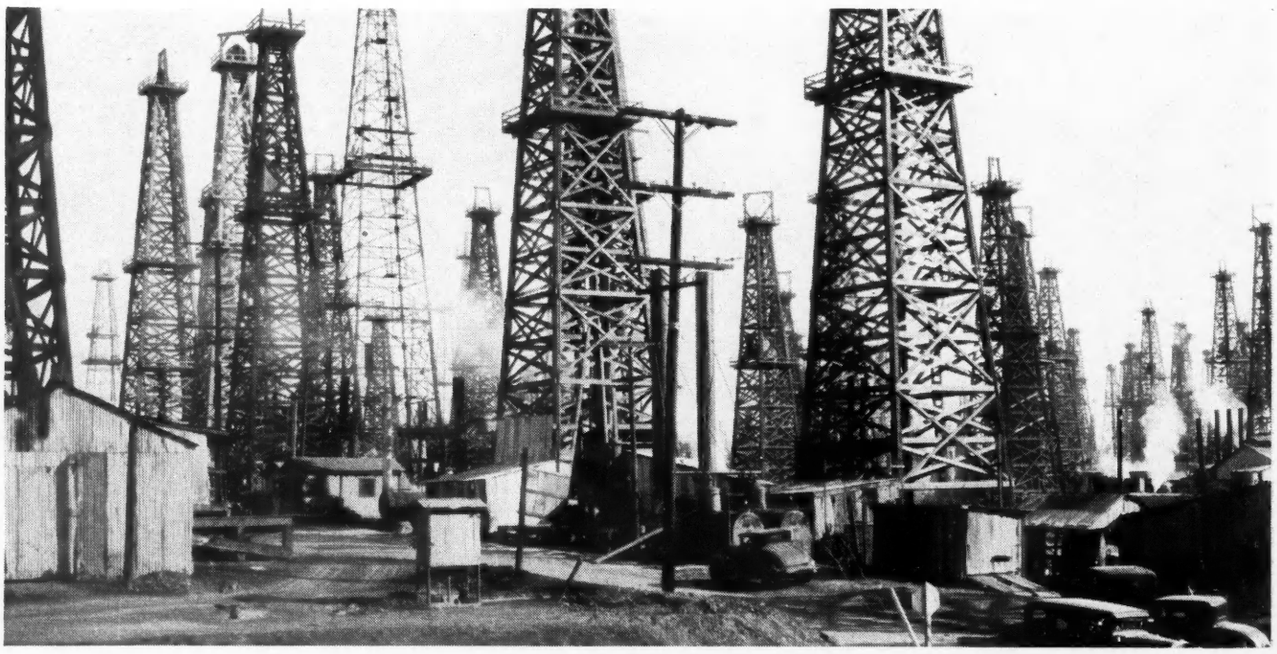
The Long Beach field in many respects has been the greatest oil producing area ever developed. With a very small productive acreage and a record thickness of producing formation, it has established a record that will be difficult to equal. With a producing area of only 1300 acres, this California field already has yielded almost 575,000,000 barrels of oil, a column of oil that would flood the field on the surface to a depth of 55 feet. The oil recovery has been about 440,000 barrels per acre. About 1400 full-fledged wells have been completed, or slightly more than one well to each acre. The average well recovery has been 400,000 barrels, a record for a fully developed field.

It is necessary to consider the great thickness of the producing formations at Long Beach, as well as the large number of producing lenses, when praising or attacking the well spacing program. The field has produced from all depths between 2400 and 8000 feet, but the producing zones have by no means been uniform or continuous over the entire field. In the center of the field, however, it would have been possible during the early development period to include the full series of zones or sands in each well, since no intervening water was present and there were no long breaks between producing formations.

Although the Long Beach field is referred to as a one-zone producer, it is not a structure of this type. At least three major zones are recognized, even though for practical purposes a well might have been completed to produce from all three without danger from water. Each major zone also is divided into many thinner strata, the combined alternating layers of sand and shale forming a thick lamination.

If only 260 wells, or one to every five acres, had been drilled at Long Beach, it would have required an average well yield of 2,200,000 barrels to equal the present field recovery of almost 575,000,000 barrels from the 1400 wells. Long Beach is typically a townlot area, and control of drilling was impossible under laws existing during the principal development periods.

The record production from 1400 wells at Long Beach does not prove that close well spacing has been best for the field. Wider spacing and better production methods might have given an even greater yield. Water encroachment has been rapid in many parts of the field, due to over-production, and the formation pressure has been dissipated in all sections of the field. It is widely believed, however, that the drilling and re-drilling of the past five years has done much to increase the recovery of oil that might not have been obtained by the original development. Dissipation of the original formation pressure apparently left a large amount of oil in the several strata, making it necessary to drill many wells to tap these lenses. Whether the original drilling of 400 to 600 wells adequately tapped all sand lenses is a question, but the action of many recent comple-



Well spacing at Long Beach would make a good jig-saw puzzle. It was here that more than 1400 wells were drilled on 1300 acres. Due to great thickness of producing formations the oil recovery has been high.

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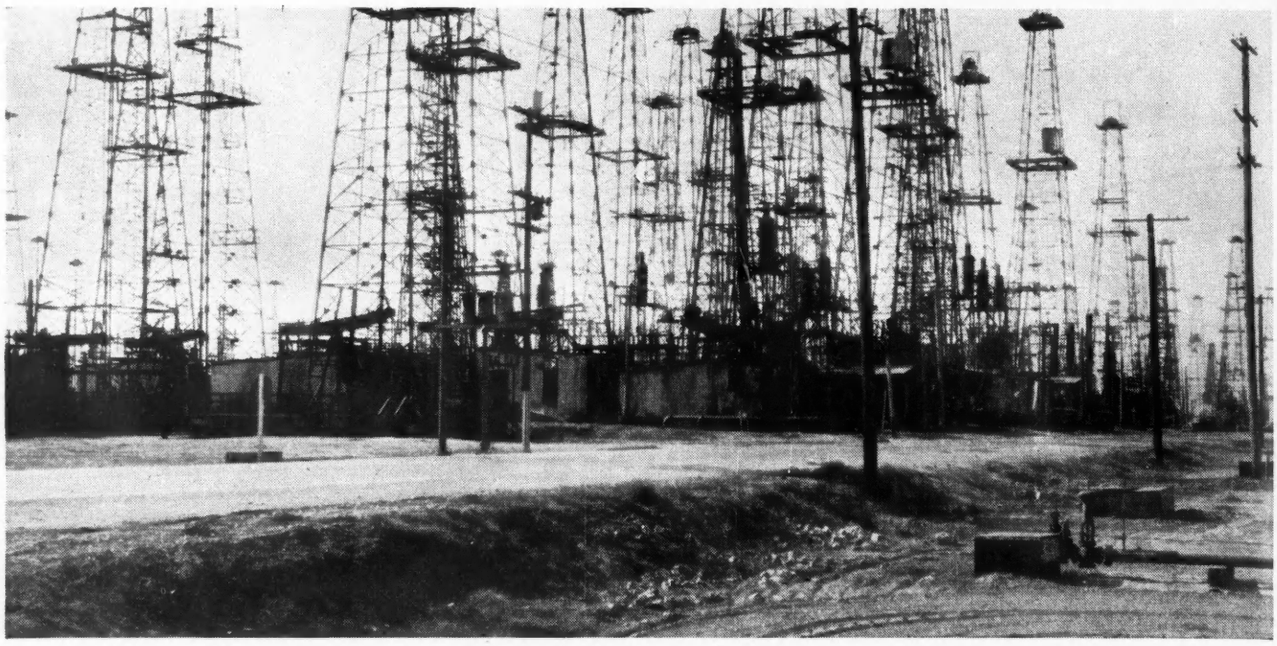

Townlot drilling at Santa Fe Springs resulted in an operating loss to several companies seeking to protect their small tracts from drainage. Wells were spaced only a few yards apart.

tions indicated a lack of wells in some of the neglected strata.

The Conroe field represents one that is producing from a fairly uniform sand body, in direct contrast to the Long Beach field. In such a field is is possible to carry out a wide spacing program, where the lease ownership is not too involved. Conroe undoubtedly offers evidence that wide spacing and conservative production practices give a minimum formation pressure decline. One well to 20 acres has been drilled in this field, about 875 wells having been completed on 17,000 productive acres. Although this field has produced about 71,000,000 barrels of oil in five years, the bottom-hole pressure has shown a very gradual decline. Most of the wells flow satisfactorily and only a limited amount of salt water has been drawn into wells that originally showed no water.

All parts of the field apparently are affected by the operation of the 875 wells, but the effectiveness of the drainage force midway between wells has been questioned by advocates of a close spacing plan. The most recent completions at Conroe showed a bottom-hole pressure considerably below the average for the first group of wells, indicating that all parts of the field had been affected by operation of the first producing wells. Whether the oil drainage from the undeveloped areas paralleled the loss in formation pressure can not be determined.

The Conroe field now is fully developed, but a long period of time will be required to determine whether the wells were perfectly spaced. Even at the end of an extended production period, advocates of close well spacing will be able to attack the conservative plan, since there will be no way to prove or disprove the contention that a close well spacing plan would have given better results.

One well to 10 acres at Conroe would have doubled the number of outlets, and roughly would have doubled the drilling costs. It is very doubtful whether the field would have been given twice the allowable it has enjoyed, had double the number of wells been drilled. Ultimately there will be no way to determine whether an increased drilling program would have given a greater recovery. It is unfortunate that a test field cannot be drilled two or three ways to settle the well spacing problem.

Conroe is not a model field, but the wide well spacing forces were in power when the area was developed. It is to be hoped for the sake of the sponsors that the plan will prove a success. The field has been sensibly produced and the action of the field at least supports the theory that a sound production plan is a function of formation pressure conservation.

Proration Now a Factor

The method of proration in many fields has forced well spacing into the background. In a number of areas, including the East Texas field, the proration scheme practically guarantees a full well allowable for every completed well, regardless of the size of the lease. Such a condition means that it is only necessary to obtain a drilling site and a permit to be in line for a well allowable equal to that of an offset well on a five-acre tract. This leniency in allowables has encouraged intensive and needless development in many fields.

A well spacing program based on the amount of oil in place seems far more equitable than one based on anticipated allowables. It is obvious that close well spacing will not be practiced on leases having a very thin producing formation, unless the operator is virtually guaranteed a full well potential without regard to the nature of offsets or the size of leases. The oil-in-place basis takes into consideration the enforcement of equitable proration. The acreage-potential basis for determination of well allowables would reduce drilling in many fields, while in other areas it might force additional drilling on leases that are clearly undeveloped. Under-development might be as serious as over-development, where an

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operator attempted to obtain an unreasonable allowable from a single well on a large lease.

If the petroleum industry expects to keep proration as a governor on production, certain well spacing and allowable inequities must be ironed out. Many conservatively developed fields have been given reduced allowables because of more intensive development in fields that have not followed a definite well spacing plan. These inequities have reduced the allowables of several operators who need more oil than they are permitted to produce, and dissension has developed in some quarters.

One of the surest ways to confuse the average oil operator is to approach him with a complex well spacing formula. Unless it is possible to reduce the spacing plan to simple terms, the practical operator becomes suspicious. By far the greater number of persons involved cannot follow the higher mathematics offered in the typical well spacing formula. It is not difficult, however, to show the operator that only a certain amount of oil is in place, and that he cannot expect to operate at a profit by drilling a greater number of wells than are justified.

In the final analysis of the well spacing problem, operation at a profit is the main objective. Regardless of the humanitarian and philanthropic claims of both the close spacing and wide spacing enthusiasts, back of the entire development scheme lies a desire to make a profit. This desire is both natural and legitimate and is as old as industry itself.

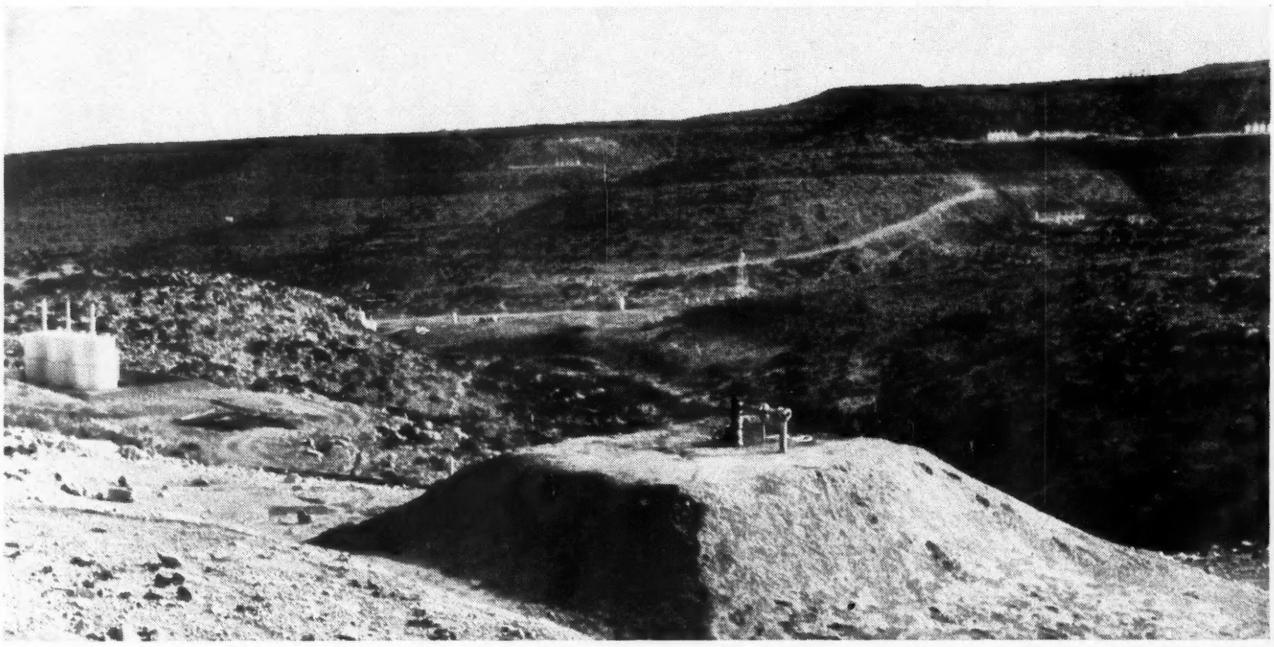
The time element, respect for the neighbor's oil in place, market demands, inequitable allowables and disregard for sound production practices are factors that are too often twisted around to meet a particular need. A well spacing program that would exactly fit the requirements of a small company needing additional oil would not be approved by a large company that does not need more oil. Where a sharp difference in oil requirements exists between operators, each faction necessarily insists it is justified in its claims for a spacing program best suited to individual needs.

Where small and large operators are interested in a single field, any sharp difference in crude oil requirements tends to force the different factions toward opposite extremes in well spacing. One extreme often is as bad as another, since it is possible that a large operator would prefer not to develop a field at all, while the smaller operator would be anxious to overdrill the field to meet oil requirements.

The relation of well spacing to oil recovery is considered by both the close and wide spacing advocates, but the chief difference lies in the interpretation of the word "recovery." Many companies would prefer to drill 100 wells and recover 30 percent of the oil in place in 10 years, in preference to a 50-well spacing plan that would give a 50 percent recovery in 20 years. Other companies not in immediate need of oil would select the spacing plan that would give the greatest recovery over a longer period. Proration has been the great leveler of ideas, however, and agreements have been reached in many fields.

It does not seem entirely logical to base a discussion of well spacing on the question of ultimate recovery of oil. Economic factors must be considered, even if at the expense of either a wider or closer well spacing program than has been proposed for a field. Phelps claims that as the distance between wells is decreased from a wide spacing to a closer spacing, the net return per acre to the operator increases to a maximum sum at the ideal spacing, and that closer spacing beyond the ideal point results in smaller profits. He points out that very close spacing of Wells can easily lead to an operating loss.

The most equitable well spacing program seems to be one that takes into consideration such factors as sand conditions, oil in place, depth of productive sand, market requirements, capital investment, and human nature. Where a large number of operators are involved, it always will be difficult to offer a well spacing plan that will serve all interests alike.



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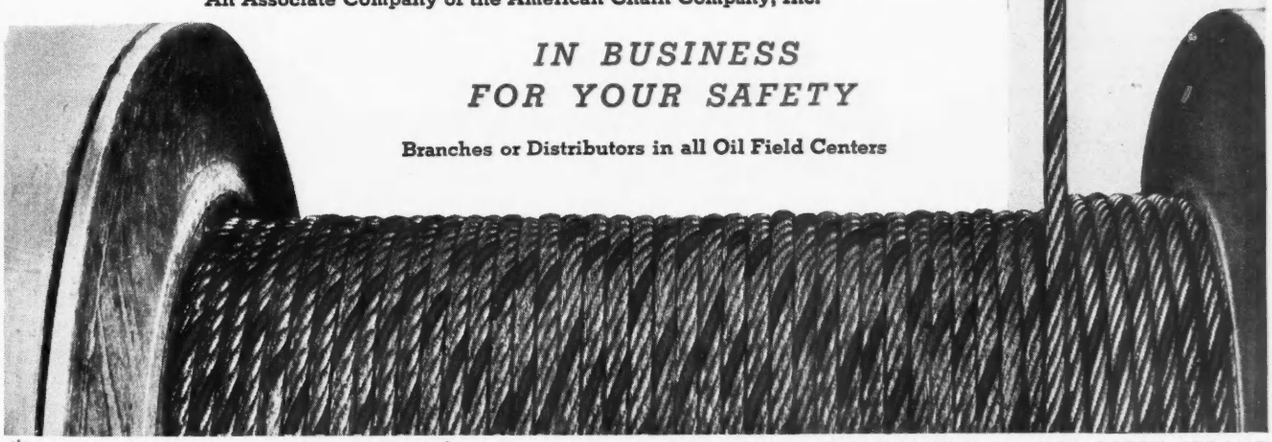

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Petrographic and Physical Characteristics

OF SANDS FROM SEVEN GULF COAST PRODUCING HORIZONS

By M. T. HALBOUTY,
Chief Geologist and Petroleum Engineer,
Glenn H. McCarthy, Inc., Houston, Texas

PART IV

Shape Results

THE shapes of the grains of sand have some influence on the porosity of a sand together with the uniformity of grains and the arrangement of the packing system. In other words, if the grains are shaped uniformly the porosity will also be affected. It has been borne out by the use of spheres, that if a group of the spheres of uniform size are packed in the closest manner possible that the pore space between them is 25.95 percent by volume.[12] If the spheres are of different sizes the pore space is less because the small particles fill the spaces between the large ones. If the particles are of irregular or angular shape the porosity may be greater or less than that of a system of uniform spheres, but if the material is highly angular, with no flat particles, the porosity is likely to be greater. With these points in mind, it has been found that to some degree the porosity of the sands (which will be later published) is affected by the shapes of the grains found in the sand horizons studied. As porosity of sands is tremendously important in the oil development program, this factor of shape influence also becomes of similar importance. In some of the most angular of the sands studied in this work, the porosity was as high as 28 percent. However, with similar percentage of angular grains present in a sand from the same horizon the porosity was as low as 2 percent. This difference could be attributed to the arrangement of the packing system, irregularity of grains and excess cementation of particles. Such studies for determination of correct criteria would surely necessitate further research.

In some instances the shapes of the grains relate a story of the deposition and the factors influencing deposition. Fine grain sands would probably indicate long transportation, and if they are rounded it would also indicate rolling and suspension in water with abrasive action subjected to them. If the grains are angular, the transportation was smooth and little abrasive obstacles were apparent. A medium grained sand would probably indicate fairly long transportation and the shapes of the grains would depend upon the condition of transportation from the source bed to the deposition locality. Coarse grained sand would probably indicate short transportation and their shapes dependent upon transporting factors.

Transportation of grains is not necessarily meant from the original source bed, but from the previous bed of deposition from which they were dislocated. Grains are washed from older formations and redeposited in younger ones, and the effects of the physical features depends upon the conditions from which they were removed and redeposited. Gulf Coast sand bodies were redeposited a number of times and each cycle of erosion and deposition effects the shapes of all sizes. Large particles may be rounded because of the depositional factors, whereas small grains may be angular. It has been found that the smaller grains are the most angular in Gulf Coast sand. This condition may be attributed to the various cycles of deposition and erosion against larger grains.

No marked difference or diagnostic value was found to occur from the study of the shapes of the grains in the Miocene or *Discorbis* zone sands. The general similarity were the same, that is, a very small amount of rounded grains were counted as compared to the sub-rounded grains with the maximum percentage being sub-angular grains, and a small amount of angular grains. Figures 49 to 60 inclusive are representative of the Miocene and *Discorbis* zone sands, Figures 49 to 52 inclusive being from the *Upper MDv* zone sands, Figures 53 to 56 inclusive from the *Lower MDv* zone sands, and Figures 57 to 60 inclusive from the *Discorbis* zone sands.

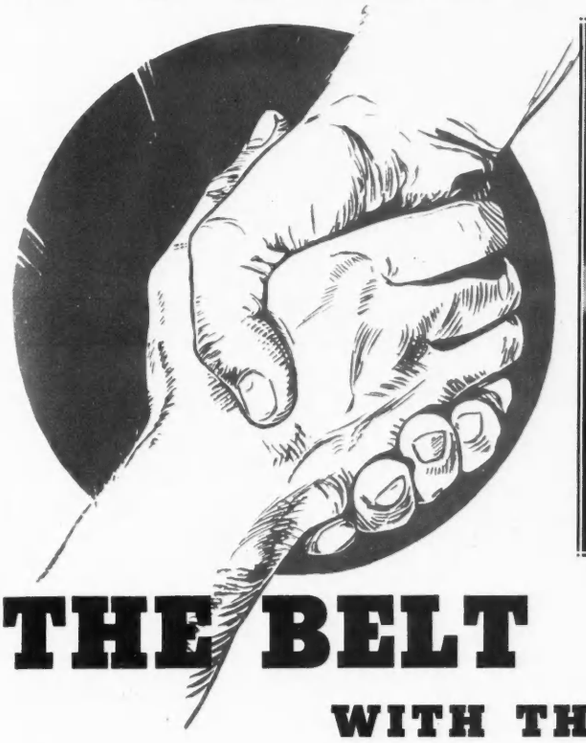
The shapes of the grains from the *Heterostegina* zone sands were very different than those of the upper zones in that an unusual percentage of angular grains were prominent. Figures 61 to 64 inclusive show the characteristic shapes of the sand grains in this zone.

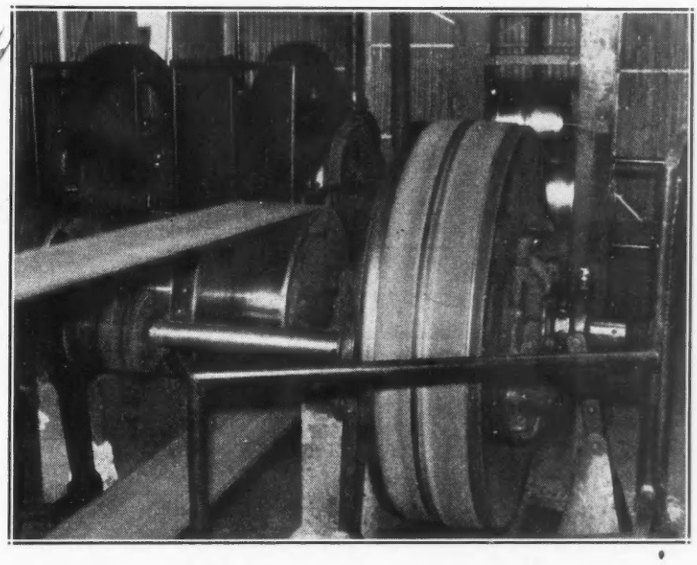
The angularity of the *Heterostegina* sands are due to the shallow *Heterostegina Sea* that carried and deposited the particles. *Rugged* transportation and a shallow, relatively quiet sea caused the grains to settle immediately and to be deposited without further rolling or floating in the sea waters. Sharpness of the grains was limited, however, the angularity was very distinct without the so-called "sharp" characteristic. As stated in earlier parts of this paper, the description of angular grains may vary from sub-roundness on one side and angular on all others which would be either called angular or sub-angular. However, the *Heterostegina* grains were rather medium sized and thick with an angular uniformity which was distinctly angular but not characteristically flat and knife edged, which would characterize *sharp* grains. A grain may easily be angular, but not sharp. This point is stressed, because the *Marginulina* sands were sharp grained although not as angular as the *Heterostegina* sands.

The *Marginulina* sands were made up mostly of fine,

[12] C. S. Slichter, "Theoretical Investigation of the Motion of Ground Water," U. S. G. S. 19th Annual Report, part 2, p. 310, 1899.

SUPER EXCELO





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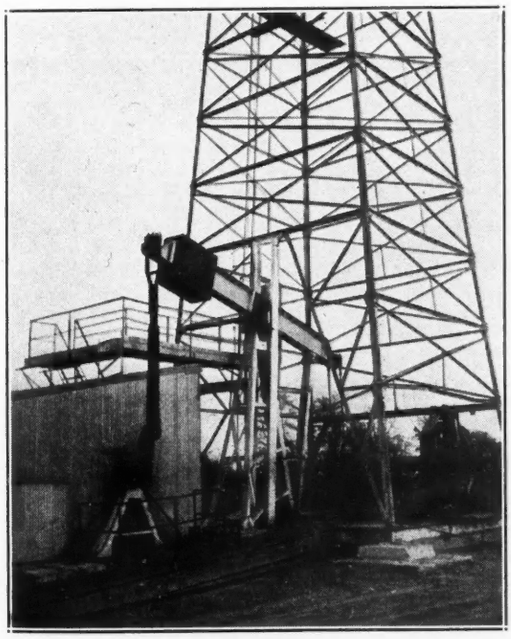

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Manufacturers of Rotary and all other types of Hose, Transmission Belting, Packing, Gaskets, Rings, etc. for Oil Country Service.

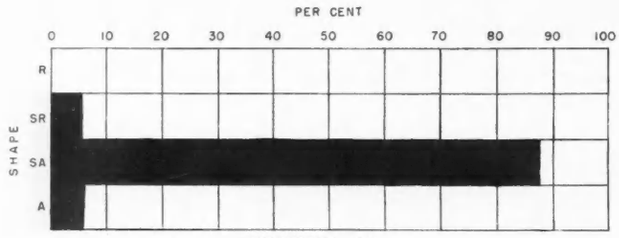


FIGURE 49

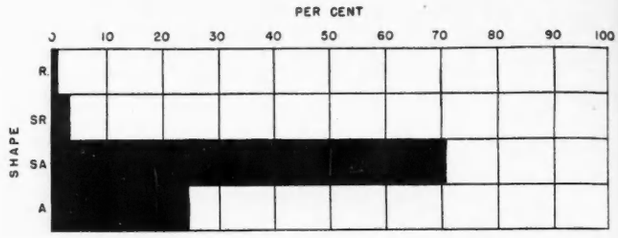


FIGURE 50

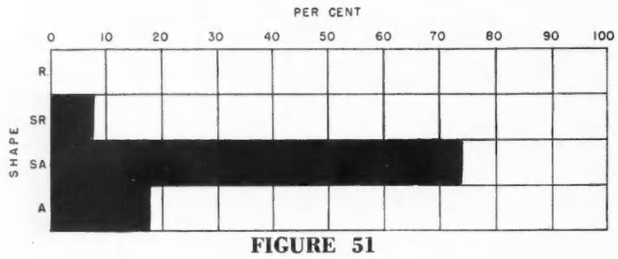


FIGURE 51

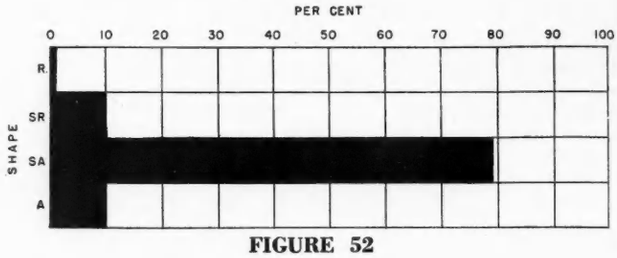


FIGURE 52

Histogram Illustrating Shape of *Upper MDv* Zone Sands

sub-angular, sharp-edged grains and even though the percentage of shape characteristics were not wholly outstanding, the sharpness of the grains make these sands correlative. Figures 65 to 68 inclusive record the shapes of the *Marginulina* sand grains.

The sands from this zone were rather fine to medium grained with the edges briskly broken in flat faces, forming knife edges, which by feel is said to be "sharp sands." The *Marginulina* grains were not to a high degree angular, i.e., the *Heterostegina* grains being more angular, but the grains of the *Marginulina* sands seemed as if they were cut either into or on the edges with a sharp knife which show a polished or glossy surface. On the edges of some grains the indication would be of a fresh fracture while on the opposite sides of some grains the characteristic would be conchoidal and subrounded surfaces. Anyone familiar with different sands from various horizons from a macroscopic standpoint, can easily feel the sharpness of *Marginulina* sands and definitely state the horizon. Experience will eventually

Photomicrographs Showing Grain Shape and Size of *Upper MDv* Zone Sands

(Multiplied 25 times)

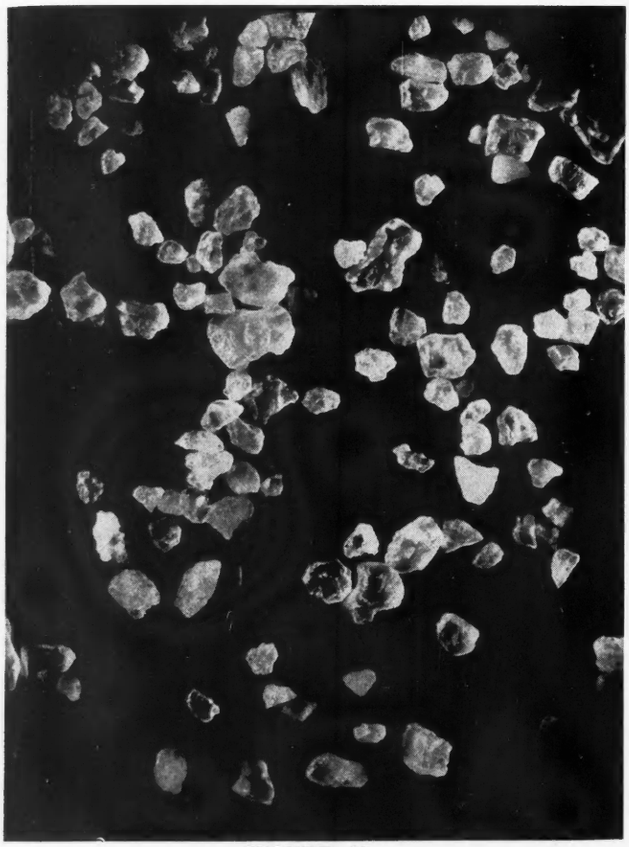


FIGURE 81

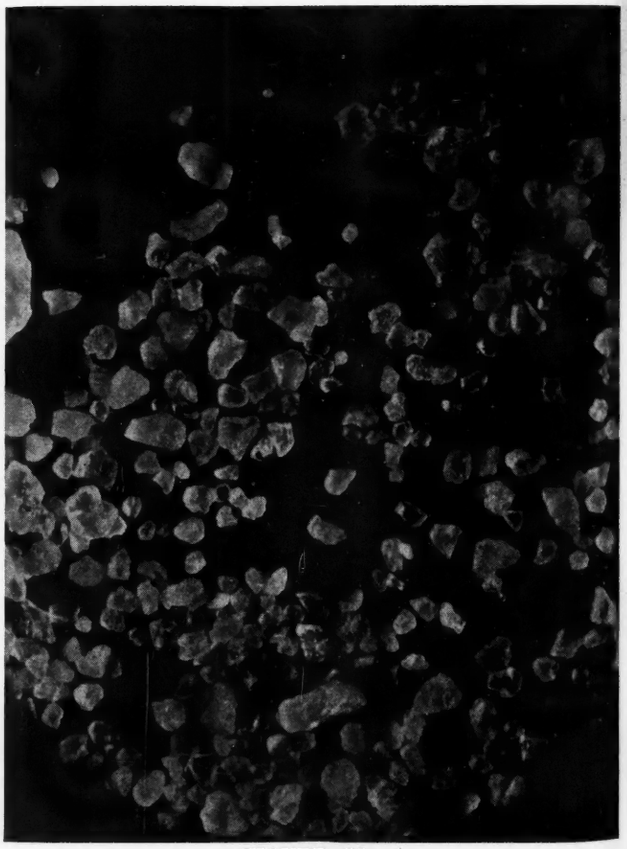
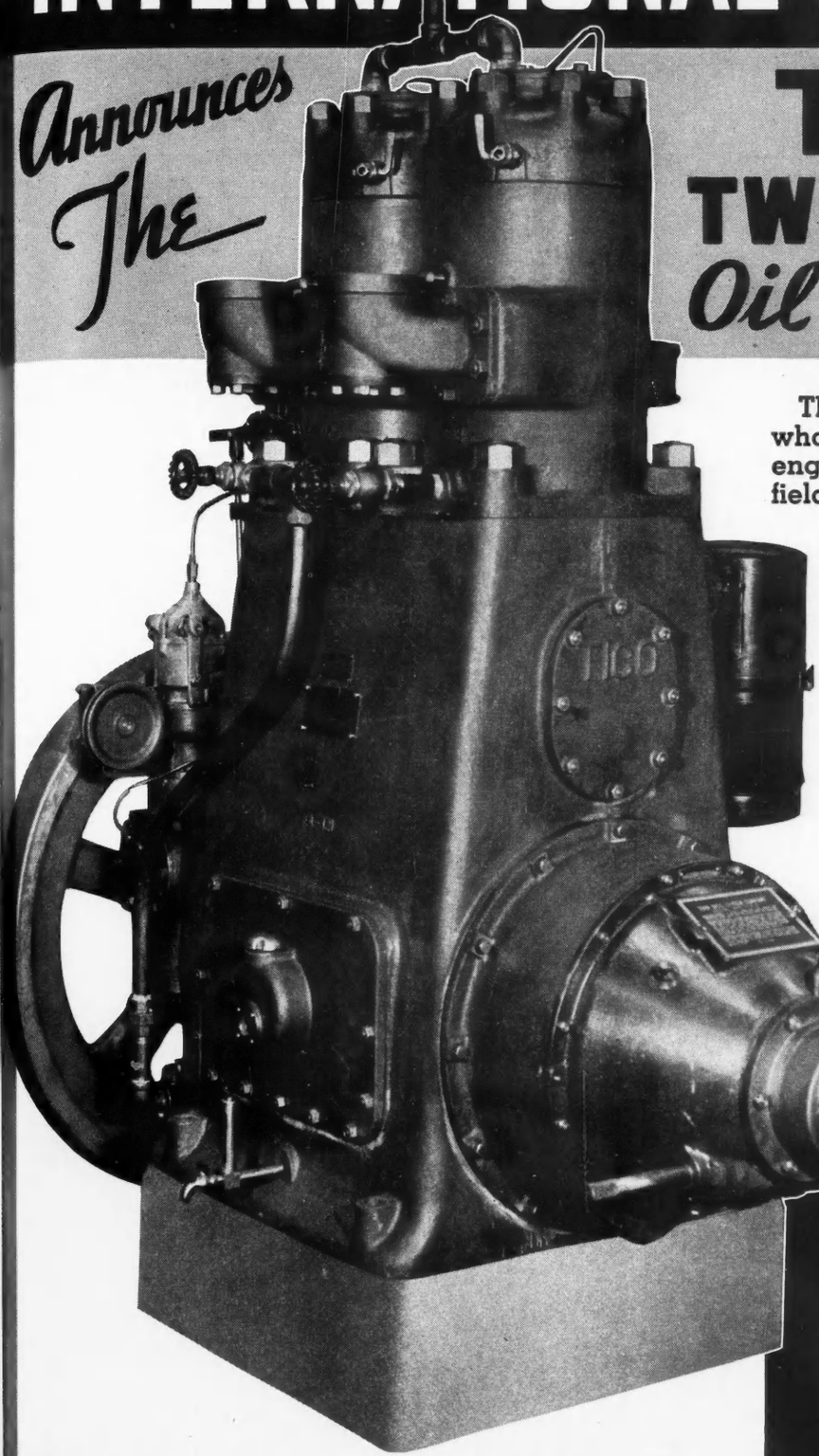


FIGURE 82

INTERNATIONAL SUPPLY CO.

Announces The

TICO TWIN VERTICAL *Oil and Gas Engines*



The TICO Improved Twin Vertical Engine, whose construction and features combine engineering design and years of practical field experience, is now offered for oil industry use, with complete confidence in its ability to meet the most severe oil field conditions.

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MAJOR SPECIFICATIONS

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- Crosshead equipped with two bronze shoes and a replaceable full-size wrist pin bushing of bronze.
- Complete lubrication is effected by splash to all main parts—flood to auxiliary drive and force feed to cylinders and governor.
- Diesel is equipped with Bosch injection—gas engine with Scintilla magneto.
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- Nickel cast iron cylinders.
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Maud	Ada	Kilgore	Kermit	Chase	Hobbs
		Willow Springs		Hays	

INTERNATIONAL SUPPLY CO.

▶▶▶ TULSA, OKLAHOMA ◀◀◀

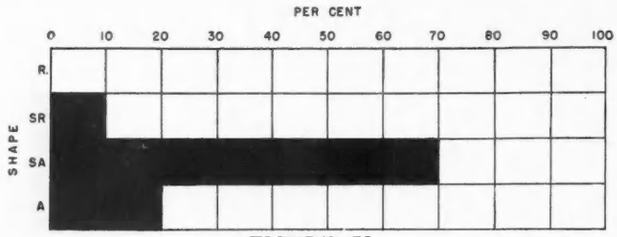


FIGURE 53

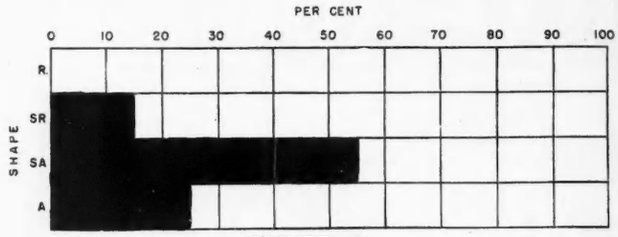


FIGURE 54

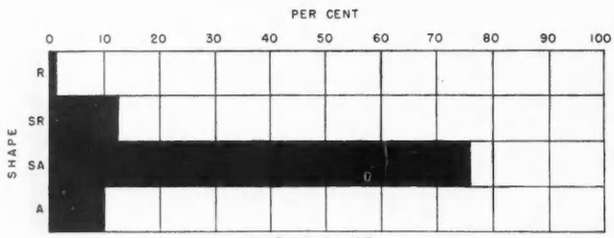


FIGURE 55

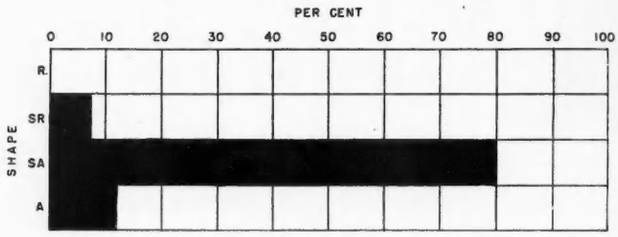


FIGURE 56

Histograms Illustrating Shape of *Lower MDv* Zone Sands

lead him to know that there are no other sands in the Gulf Coast producing section that are as "sharp" as the *Marginulina* sands.

The Frio sand grains showed similar characteristics in tinguishing features of, and the large round grains are of correlative value. Figures 69 to 72 inclusive show the tinguishing features of these sands, and the textural features of Frio grains are of correlative value. Figures 69 to 72 inclusive show the percentages of grain shapes of sands in this formation.

The roundness of the grains in the Frio sands may be attributed to the possibility that the *rounded* grains have had a longer history of abrasion than that of a single cycle of transportation. Such being the case, the grains would be geologically very old. The Frio sands being an off-shore or littoral deposit, and the particles derived from both the land and the sea may account for the large number of rounded grains, and for the characteristic that the rounded grains are fairly coarse grained. These rounded grains are not the extreme coarsest, but just short of the coarsest. The larger

Photomicrographs Showing Grain Shape and Size of *Lower MDv* Zone Sands

(Multiplied 25 times)

FIGURE 83

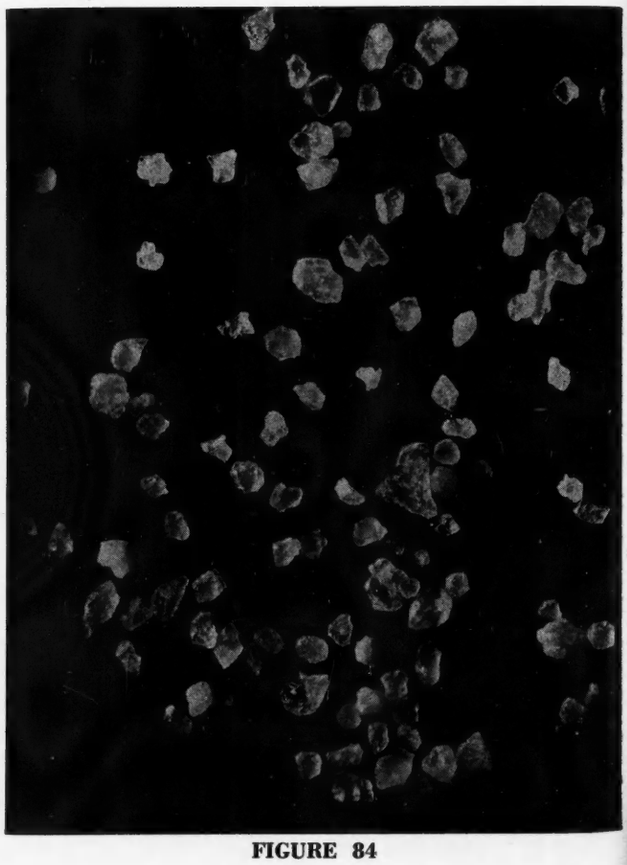
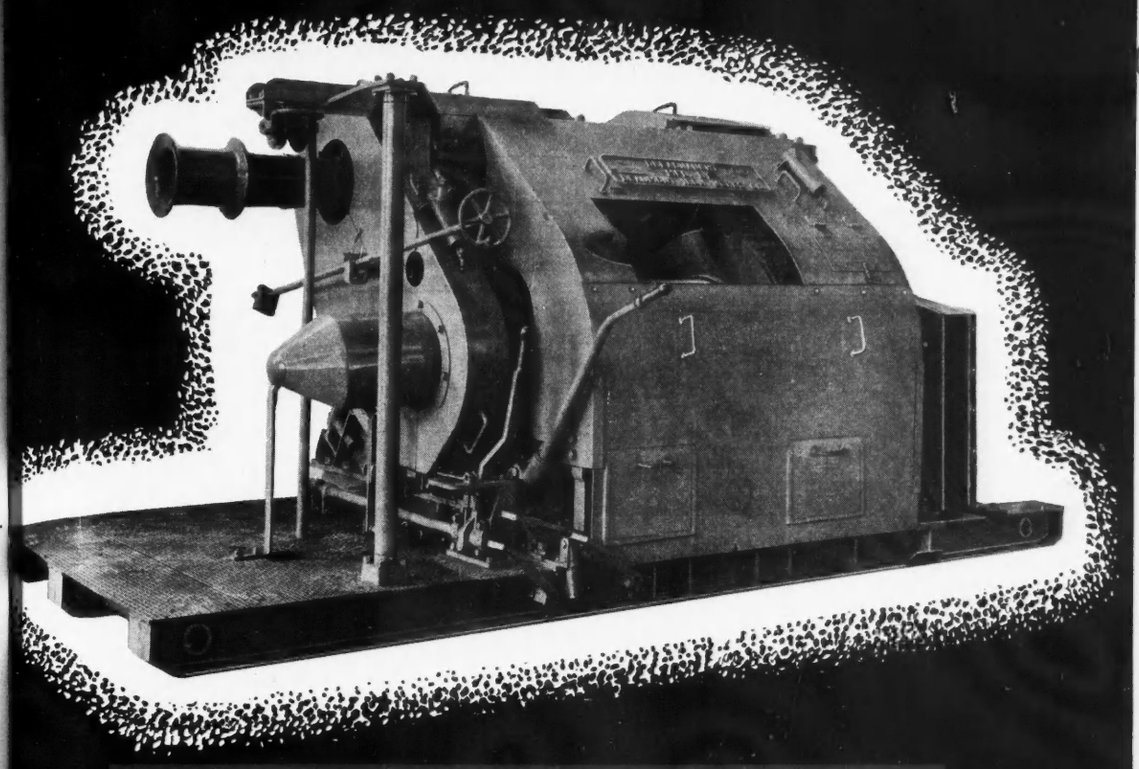


FIGURE 84



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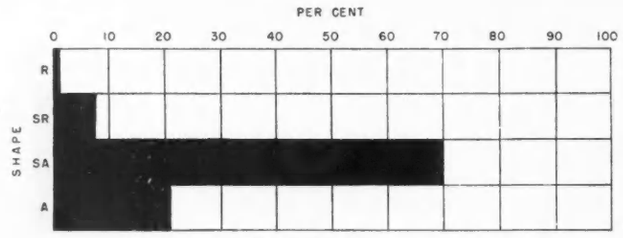


FIGURE 57

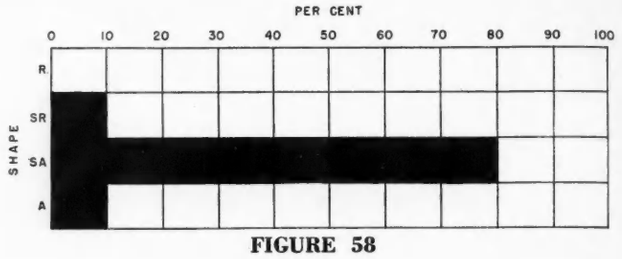


FIGURE 58

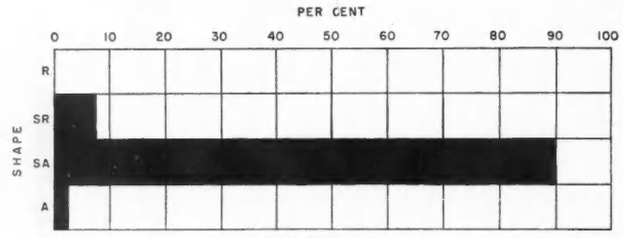


FIGURE 59

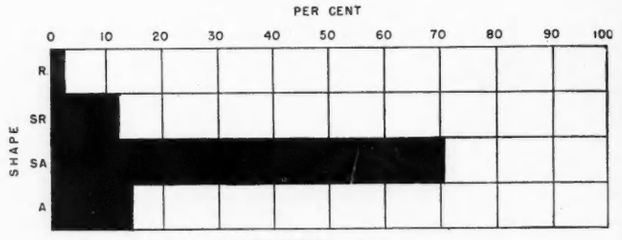


FIGURE 60

Histograms Illustrating Shape of *Discorbis* Zone Sands

grains are not floated in water as the smaller grains which are cushioned and floated; therefore, the slightly smaller grains are rolled against abrasives, chipped off and gradually rounded out.

The Cockfield and Upper Saline Bayou sands do not show any distinguishable features in grain shapes. The grains have a general trend from rounded to angular with the greatest percentage sub-angular. Figures 73 to 76 inclusive represent sands from the Cockfield horizon, and Figures 77 to 80 inclusive represent sands from the Upper Saline Bayou horizon.

In the majority of the sands from the Cockfield horizon and Upper Saline Bayou horizon, there were many particles of glauconite which were elongated and oval shaped but well rounded as far as the egg-shape figure is concerned. In the study of the sands from these two horizons the glauconite grains were also counted in the final determinations and the majority of these green

Photomicrographs Showing Grain Shape and Size of *Discorbis* Zone Sands

(Multiplied 25 times)

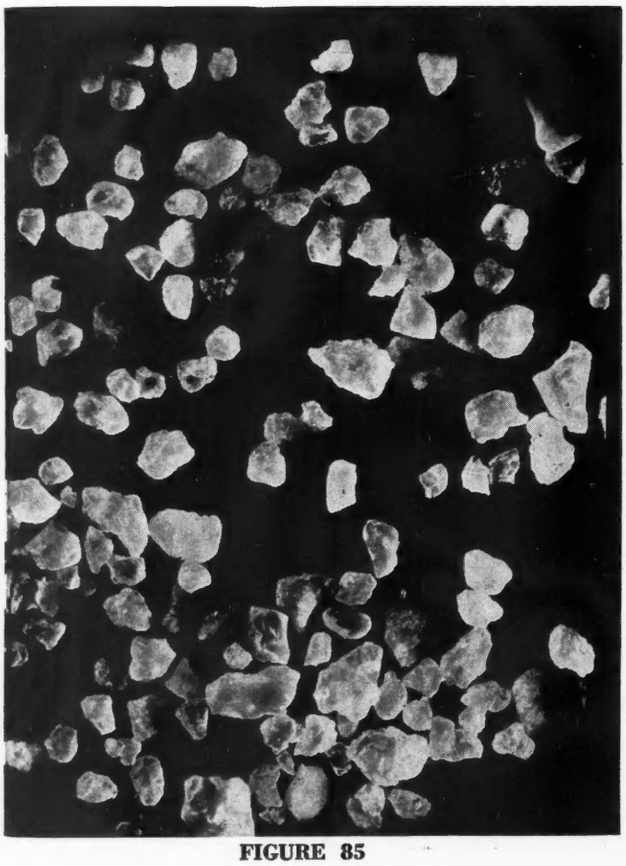
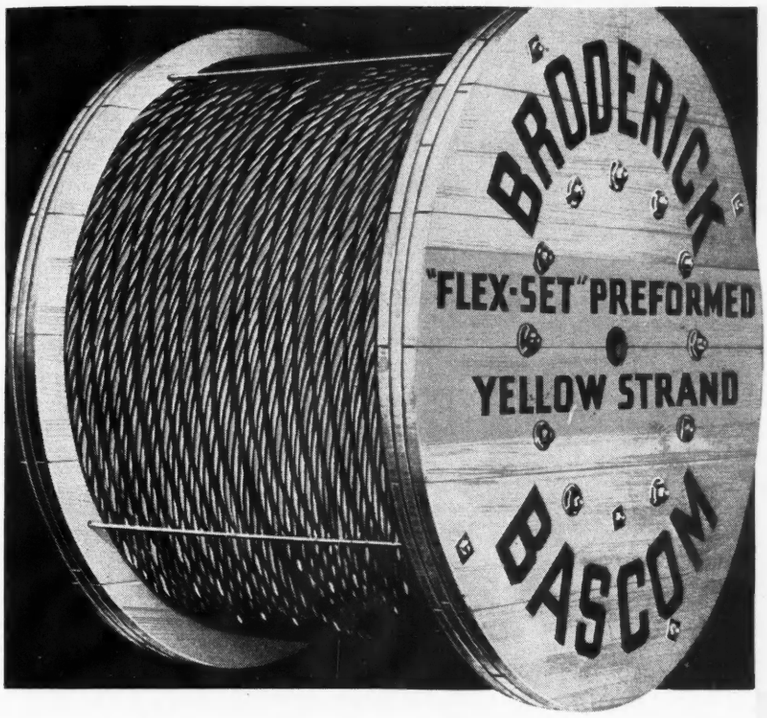


FIGURE 85

FIGURE 86



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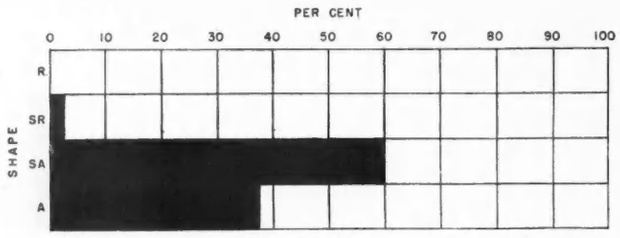


FIGURE 61

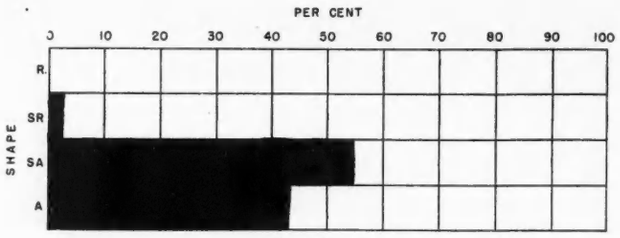


FIGURE 62

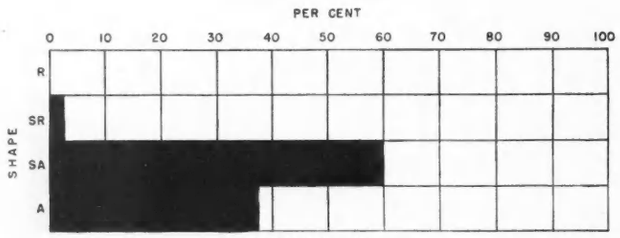


FIGURE 63

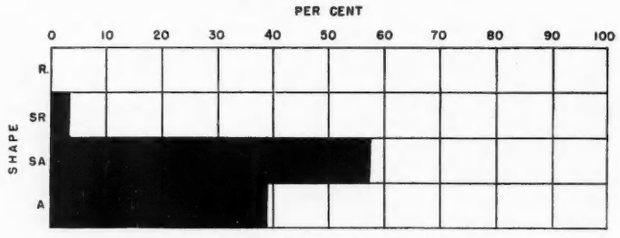


FIGURE 64

Histograms Illustrating Shape of *Heterostegina* Zone Sands

grains were placed as rounded or sub-rounded. It is well to note at this time, even though a detailed description will be given in later parts of this paper, that the glauconite grains are more pronounced and abundant in these two horizons than in any of the other five studied. As far as correlative evidence is concerned, the green sand could easily be used as criterion for correlation. The glauconite grains were similar in shape in both horizons, unfortunately, as a difference in the shapes of these grains alone would have been very important and beneficial in the segregation of these two horizons and for correlative value.

Photomicrographs were taken from representative samples from each horizon. Two samples from each horizon were photographed. Space forbade the printing of too many photographs, and the number was correspondingly limited to two for each zone. The photographs show the relative grain sizes and shapes and

Photomicrographs Showing Grain Shape and Size of *Heterostegina* Zone Sands

(Multiplied 25 times)

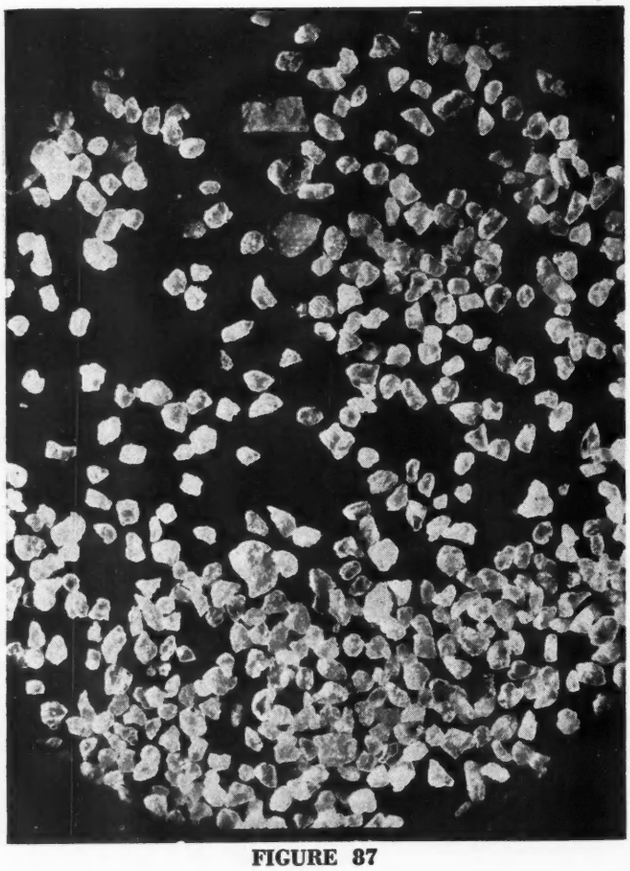
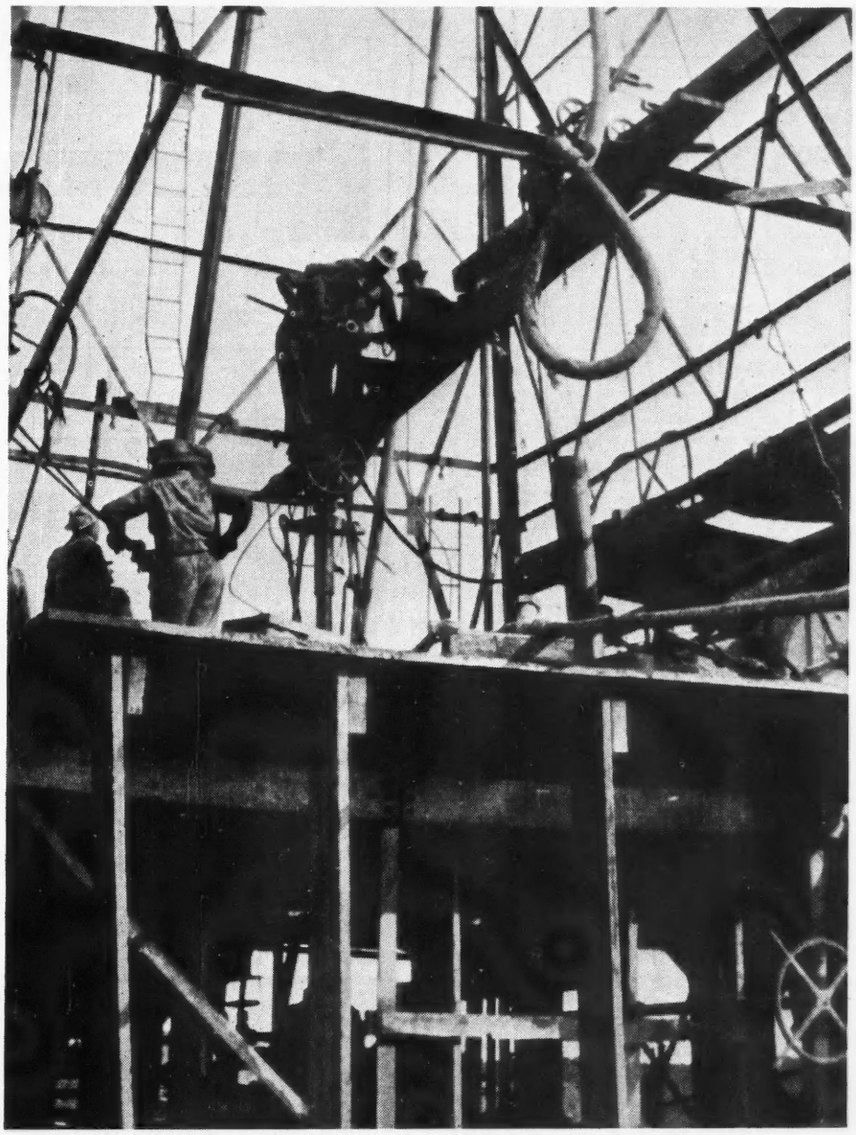


FIGURE 87

FIGURE 88



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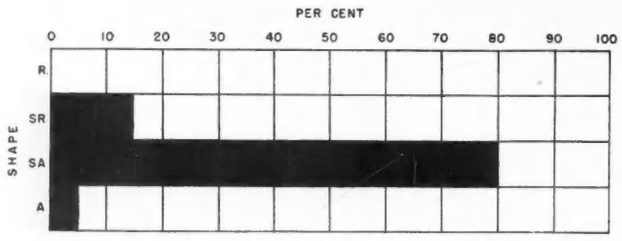


FIGURE 65

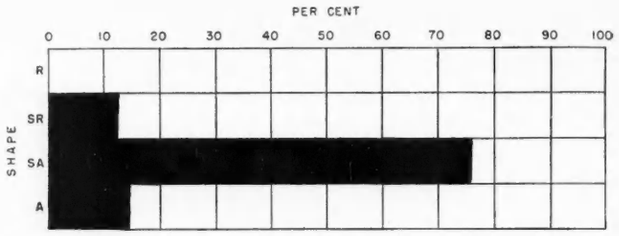


FIGURE 66

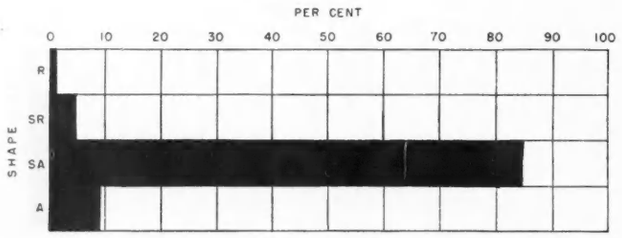


FIGURE 67

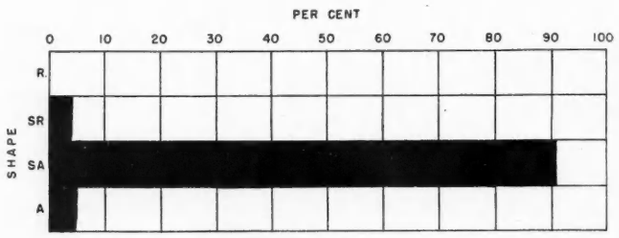


FIGURE 68

Histograms Illustrating Shape of *Marginulina* Zone Sands

afford a means to check the texture and shape results. The magnification of the grains was increased to 25 times in taking the photographs.

Figures 81 and 82 are photographs of two sand samples from the Upper *MDv* Zone and in contrast with the photographs of the sands from the Lower *MDv* Zone, Figures 83 and 84, little or no difference is shown as far as shapes are concerned. Figures 85 and 86 show the shape characteristics of the *Discorbis* sand samples and very little difference is shown from those of the Upper and Lower *MDv* Zone sands. This similarity checks well with the results obtained microscopically.

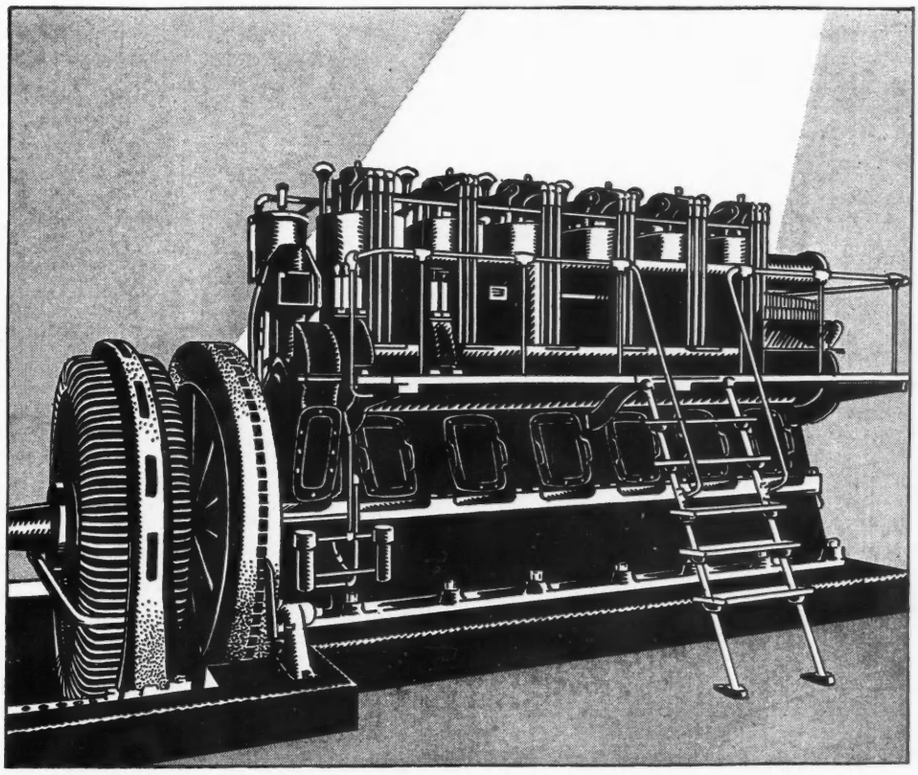
Figures 87 and 88 are photographs of the *Heterostegina* samples and the angularity of the grains is shown. By comparing these two photographs with those of the *Discorbis* and Upper and Lower *MDv* zone

Photomicrographs Showing Grain Shape and Size of *Marginulina* Zone Sands

(Multiplied 25 times)

FIGURE 89

FIGURE 90



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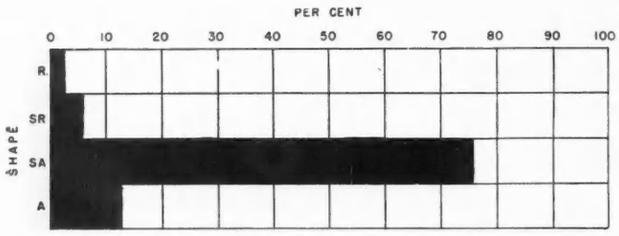

FIGURE 69

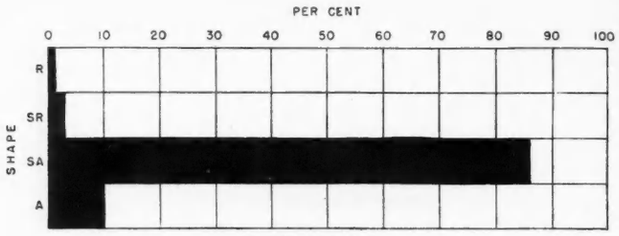

FIGURE 70

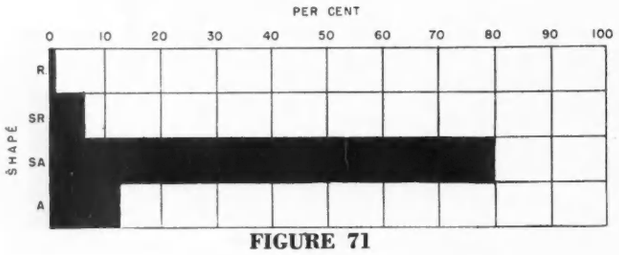

FIGURE 71

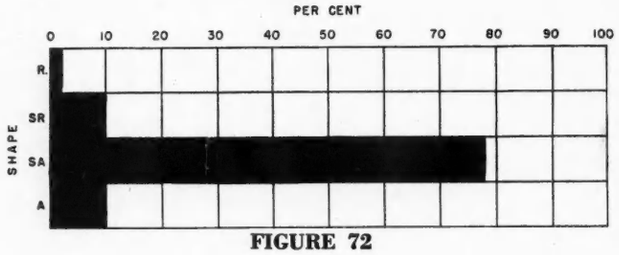

FIGURE 72

Histograms Illustrating Shape of Frio Zone Sands

sands, the difference in the angularity of the grains is illustrated clearly.

Figures 89 and 90 show the distinct sharpness of the *Marginulina* sands and the subangular characteristic which is manifest throughout the sample. By comparing the *Marginulina* photographs with those from the *Heterostegina,* an idea of the difference of the angularity of the grains can be had. The sharpness of the *Marginulina* sands affects the photographs somewhat in producing a more angular appearance to the grains; however, upon close study of the grains, one can see that not all sides of the individual grain are sharp and angular, and that they are instead subangular to subrounded.

Figures 91 and 92 need no introduction as they are readily recognized as Frio sands because of the coarseness of the grains. The Frio photographs are distinctly different than any of the others and as these photo-

Photomicrographs Showing Grain Shape and Size of Frio Zone Sands

(Multiplied 25 times)

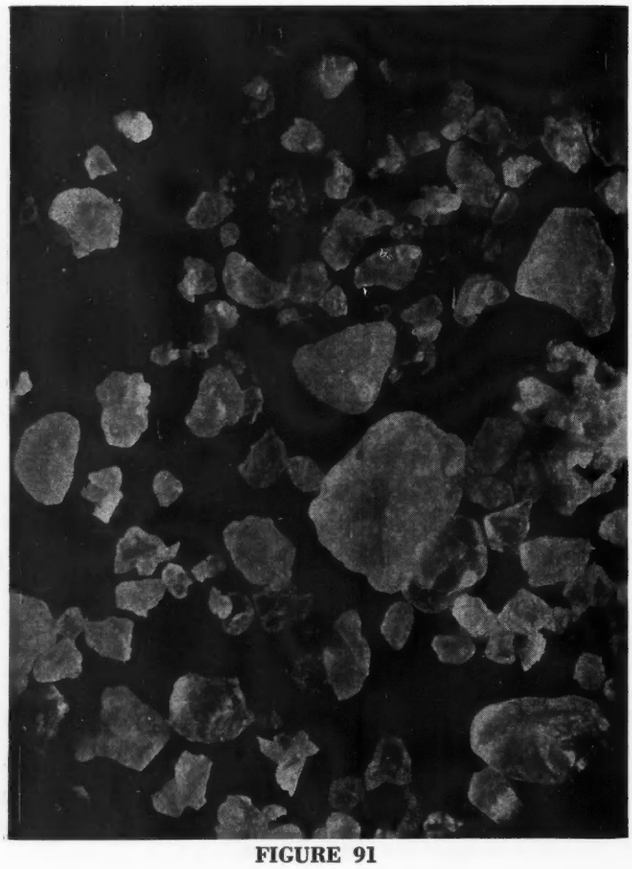

FIGURE 91

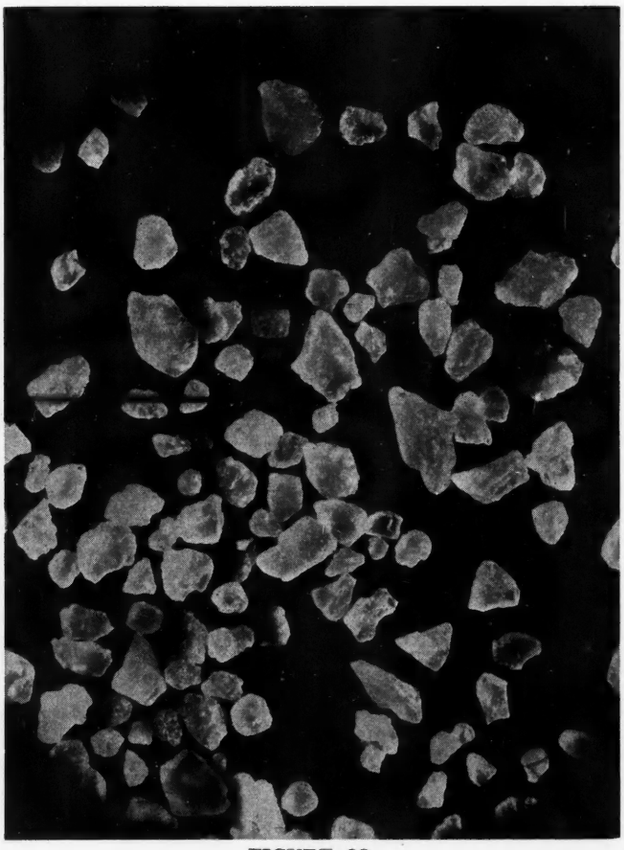

FIGURE 92

ALL INDUSTRY BENEFITS FROM THE IMPROVED WELDING MADE POSSIBLE BY
DUAL Continuous CONTROL on the New "SHIELD-ARC S.A.E." Welder
NOW—for the first time—the right TYPE and SIZE of arc to suit every job . . . every time
FABRICATING 10-GAUGE STEEL
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. . . both
TINY ARC
CONCENTRATED ARC
TANK OR PIPE WELDING WITH HEAVY RODS
BUTT WELDING 3/8" PLATE—NO BEVEL
. . . these
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Learn how you can insure maximum welding speed and highest weld quality for every job . . . how you can get these results by a twist of the wrist—as simply as tuning in a radio.

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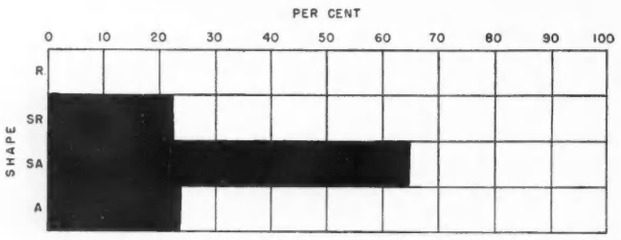


FIGURE 73

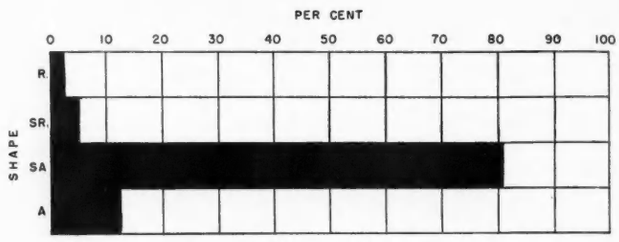


FIGURE 74

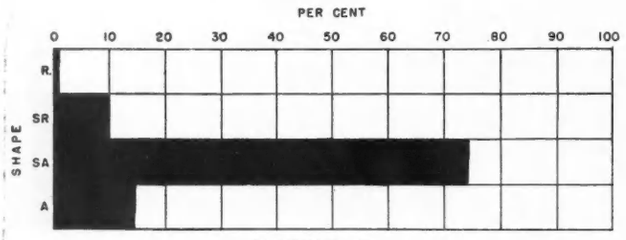


FIGURE 75

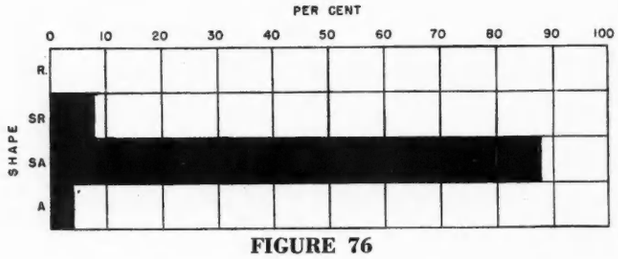


FIGURE 76

Histograms Illustrating Shape of *Cockfield* Zone Sands

graphs show the marked characteristics of these Frio sands, so do the sands themselves, from a macroscopic viewpoint, and are easily listing visible by sight. The first coarse sand found underneath the *Marginulina* section is easily recognized as the top of the Frio section. The Frio sands are unquestionably definite criteria for correlation in any section of the Texas-Louisiana Gulf Coast.

Figures 93 and 94 are photographs of *Cockfield* sands and Figures 95 and 96 are of *Upper Saline Bayou* sands and not any appreciable difference in the shapes or grain sizes is shown. Upon close observance, one can readily pick out the elongated, oval-shaped glauconite grains that are present in the sands of these zones.

Summary of Shape Results

The grain shapes of the sands from the Miocene *MDv*

Photomicrographs Showing Grain Shape and Size of *Cockfield* Zone Sands

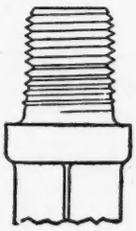
(Multiplied 25 times)

FIGURE 93

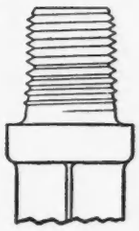
FIGURE 94

"Number ten's got another rod break!"

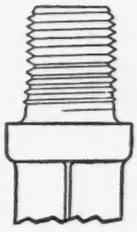
Rod breaks are at the least, inconvenient, but like taxes, are probably with us always. Axelson doesn't claim that with the installation of its rods, breaks will absolutely cease. Experience has proven, however, that the selection of the right Axelson rod for the job reduces pumping troubles and operating expenses. The majority of Axelson engineers, production men and representatives have devoted the greatest portion of their lives to the oil production equipment business. Out of this background of experience, of constant contact with the industry, there have been developed three different grades of Sucker Rods. These rods differ not merely in price and physical strength, but most important in chemical characteristics as well. It is on this point that Axelson feels IT IS PIONEERING NEW TRENDS IN SUCKER ROD MANUFACTURE AND STANDARDIZATION. One of these three rods is ideally suited to the pumping conditions of your wells. Read the brief technical description of each rod. Any Axelson representative will consult with you as to which rod should GIVE LONGEST SERVICE AT LOWEST COST.



Axelson No. 60 Sucker Rods are made from exceptionally high grade carbon steel under strict alloy practice. They are fully tempered from end to end assuring consistent physical properties. The ductility and impact resistant properties of these rods is such as to indicate their practical use for all average to heavy pumping conditions.



Axelson No. 59S Sucker Rods made of special alloy steel that materially aids their resistance to corrosion, are fully normalized and tempered from end to end. They present excellent physical properties, combining increased ductility and impact resistance with high yield and tensile strengths. They are desirable for pumping wells where extra heavy loads are encountered and where irregularities in pumping movements are unavoidable.



Axelson No. 69 Sucker Rods are made from a high alloy special nickel molybdennum steel produced in electric furnaces. These rods are especially resistant to corrosion, are fully normalized and tempered from end to end. They offer excellent yield and tensile strengths, with great ductility and impact resistant properties.

Axelson Manufacturing Company, P. O. Box 710, Vernon Station, Los Angeles • St. Louis • 50 Church Street, New York • Tulsa
Mid-Continent and Eastern Distributor: Frick-Reid Supply Corp. • *Rocky Mountain Distributor:* Great Northern Tool & Supply Co.

DEEP WELL PLUNGER PUMPS **AXELSON** SUCKER RODS

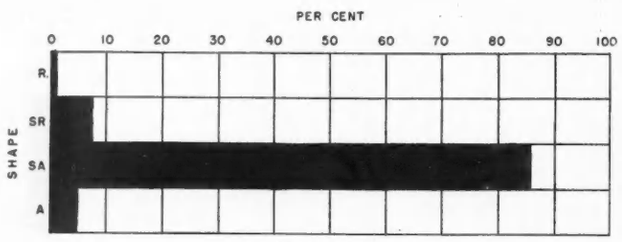


FIGURE 77

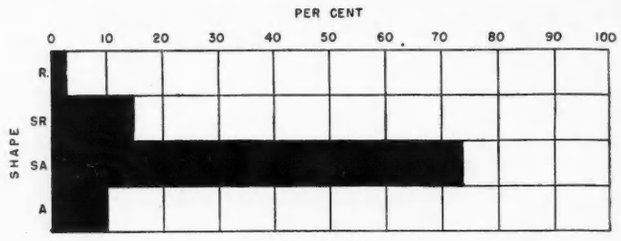


FIGURE 78

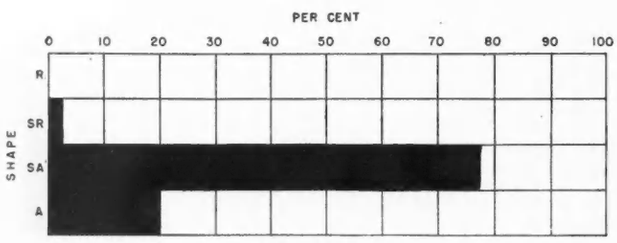


FIGURE 79

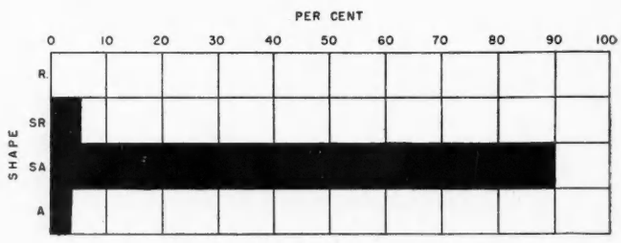


FIGURE 80

Histograms Illustrating Shape of *Upper Saline Bayou* Zone Sands

zone, *Discorbis* zone, Cockfield horizon and Upper Saline Bayou horizon are generally similar in that the grains show a maximum of sub-angular grains and a minimum of rounded or angular grains.

The *Heterostegina* sands were composed of a large percent of angular grains. This characteristic is of diagnostic correlative value.

The *Marginulina* grains were sharp and sub-angular and also important for correlative value.

The Frio sands contained appreciable amounts of rounded grains. This was found to occur in every sample, a condition not recognized in samples from the other horizons. Such criterion is of extreme importance for correlation purposes.

Photomicrographs Showing Grain Shape and Size of *Upper Saline Bayou* Zone Sands

(Multiplied 25 times)

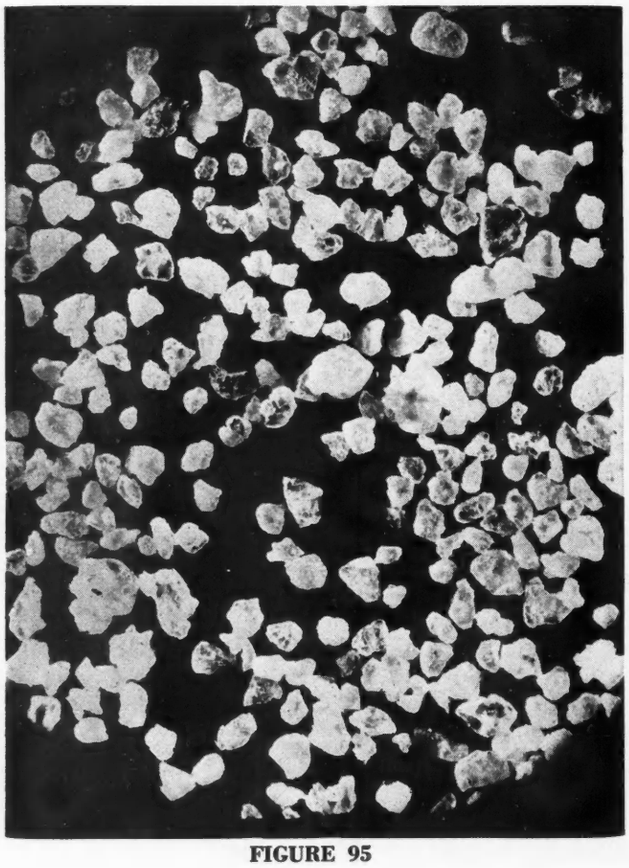


FIGURE 95

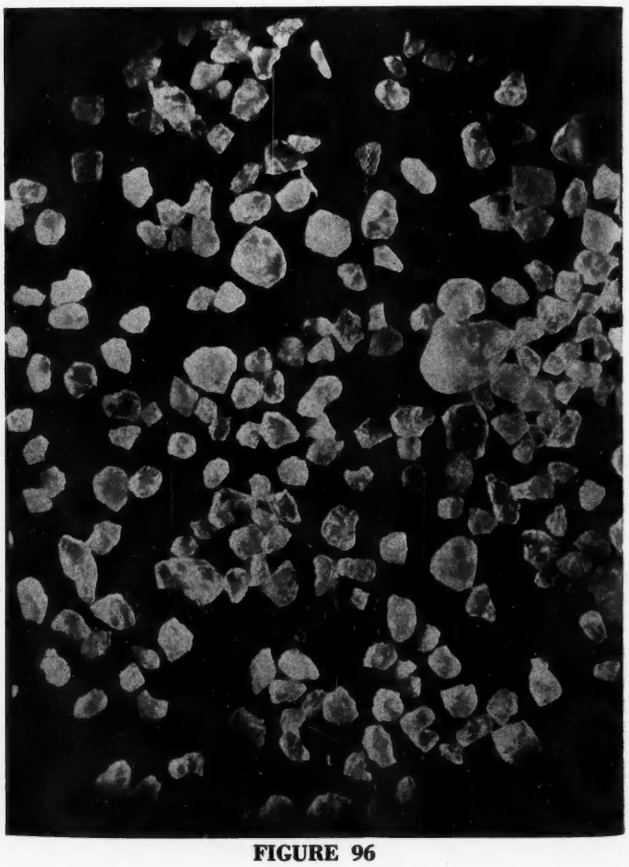


FIGURE 96

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A CORING RECORD IN THE JAL, NEW MEXICO AREA WITH A

REED KOR-KING

REED ROLLER BIT CO.—ENGINEERING DEPT No. 4751

CORE RECORD

Location JAL, N.M. Company — — — — — Well — —

NO.	SIZE	CORE BARREL	DEPTH	CORED	TIME	RECOVERY
1	6¼"	REED KOR-KING	3222	6'	4½ HRS.	4'
2	"	"	3229	7'	5 HRS.	5'
3	"	"	3237	8'	6 HRS.	6'
4	"	"	3256	19'	6 HRS.	18'
5	"	"	3276	20'	—	20'
6	"	"	3295	19'	8 HRS.	19'
7	"	"	3315	20'		20'
8	"	"	3324	9'		5'
9	"	"	3334	10'	11 HRS.	12'
10	"		3351	17'	10 HRS.	18'

REMARKS. HEADS ALL IN GOOD SHAPE — USED THREE CORE CATCHERS AND THEY ARE STILL GOOD —

135 FEET CORED 127 FEET RECOVERED

[For Complete Data on the REED KOR-KING CORE DRILL Write for Bulletin No. 362]

THE CORE RECORD SHOWN ABOVE WAS MADE IN BROKEN FORMATION WHERE RECOVERY OF ANY KIND HAS MET WITH CONSIDERABLE DIFFICULTY

WHEREVER THERE IS ROTARY DRILLING YOU WILL FIND REED ROTARY D RILLING TOOLS "GETTING THE JOB DONE"

7010 FEET TO CASING SEAT WITH 37—12¼"

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IN MOORE FIELD—OKLAHOMA

SPEED WITH LESS WEIGHT GAVE THIS OPERATOR FASTER STRAIGHTER HOLE AT LESS COST

REED ROLLER BIT CO.—ENGINEERING DEPT No. 4249

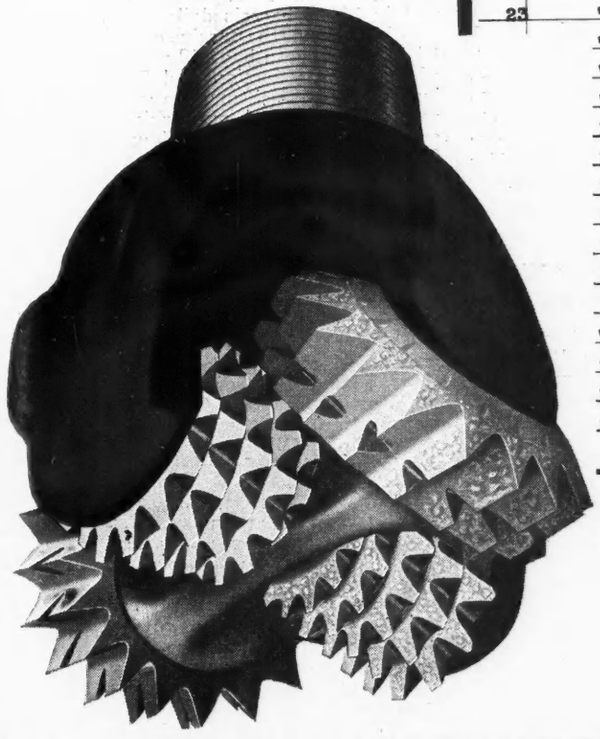
BIT RECORD

Location Moore, Oklahoma Company Well Rice #1

Contractor Franklin Drlg. Co. Driller

Date Drilling Started 1-24-36 Completed Actual Drilling Days

BIT NO.	TYPE	DEPTH FROM	DEPTH TO	FOOTAGE	TIME	DRLG. SPEED	ROT. R.P.M. Size	WT. PTS.	PUMP PRESS	PUMP S.P.M.	FORMATION	REMARKS
1	Reed		368				12¼"					
2	"		1000	632			"					
3	"		1350	350			"					
4	"		1755	405			"					
5	"		2275	445			"					
6	"		2606	231			"					
7	"		2782	176			"					
8	"		3005	223			"					
9	"		3335	330			"					
10	"		3572	237			"					
11	"		3739	167			"					
12	"		3786	47			"					
13	"		3918	132			"					
14	"		4055	137			"					
15	"		4329	274			"					
16	"		4487	158			"					
17	"		4625	138			"					
18	"		4761	136			"					
19	"		4842	81			"					
20	"		4981	139			"					
21	"		5152	171			"					
22	"		5270	118			"					
23	"		5340	70			"					
	"		5465	125			"					
	"		5586	121			"					
	"		5657	71			"					
	"		5725	68			"					
	"		5810	85			"					
	"		5927	117			"					
	"		6052	125			"					
	"		6256	204			"					
	"		6361	105			"					
	"		6598	231			"					
	"		6746	154			"					
	"		6796	50			"					
	"		6869	73			"					
	"		7010	141			"					Very Green



REED ROLLER BIT COMPANY

LOS ANGELES OKLAHOMA CITY HOUSTON NEW YORK

Mid-Continent, Rocky Mountain and Gulf Coast Distributors for MARTIN DECKER PRODUCTS

TEXAS INVESTIGATORS
Quiz Clark regarding Petroleum Council work

AUSTIN.

MEMBERS of the Senate committee investigating hot-oil problems in Texas held an extended hearing in Austin last week. Senators Hill, Poage, Collie, De Berry and Holbrook attended the meeting.

Appearing as witnesses were Tom C. Clark, former law partner of Attorney General McCraw, and several receivers in confiscation cases. Most of the hearing, however, was devoted to Clark's testimony.

The committee questioned Clark concerning the services he had performed as attorney for Texas Petroleum Council, which post he has held for more than a year. They were interested in what benefits might have been received that would justify a salary of $10,000 a year, which Clark receives.

Clark insisted that his duty was not to exert political influence as questions of some members of the committee inferred. He explained that he studied the pleadings in all confiscation suits filed, and advised certain members of the council concerning policies which they might advocate. Among the services, which Clark said he rendered, was the plan to provide investigators for the Tender Board at Kilgore.

Clark declared that he had made investigations of no cases relating to hot-oil except those affecting properties in the East Texas field. He said that he had heard of hot-oil being moved in the Corpus Christi area and at Conroe, but that he had not been instructed by the council to investigate cases there.

GEOLOGISTS MEET
In Los Angeles on March 17, 18 and 19, 1937

Los Angeles.—The twenty-second annual convention of The American Association of Petroleum Geologists will be held in the Biltmore Hotel, Los Angeles, March 17, 18, and 19, 1937. This is the first time that California has been favored by this group since a convention was held in San Francisco in March, 1928. The 1936 convention took place in Tulsa.

Approximately 1,000 members are expected to be welcomed by their hosts, the Pacific Section of the Association. The technical and business program will consume three days with local field trips and plenty of entertainment interspersed therewith. Special entertainment will be provided for the ladies. The annual golf tournament will be one of the pleasant interludes. Affiliated societies of Economic Paleontologists and Mineralogists and of Petroleum Geophysicists will convene in separate technical sessions in the Biltmore Hotel at the same time.

On Saturday and Sunday after closing of the convention, field trips into the San Joaquin Valley will afford the visitors an opportunity of viewing geological conditions relating to accumulation of oil and development of that enormous storehouse of petroleum as far north as Kettleman Hills and Coalinga.

Industry Wins

[*Continued from page 8*]

knowledge of Sumner or of the judge, he did place these names in the box, not singly but in handfuls.

"On October 16, 1930, Sumner went to the court and found the names already in the box. Twenty persons on the grand jury that returned these indictments were among those whose names were in the box."

Donovan said that Sumner then added 15 or 20 names. Before the selection of the present grand jury, another six names were added to the box, and from these six, three jurors were drawn, Donovan said.

Lewin said the government would have to have more time to study Donovan's brief before replying to it. He was given 30 days, but indicated that the government's reply might be ready before that time.

Attorneys who had filed special pleas in behalf of various corporate and individual defendants, joined with J. C. Denton, Tulsa, counsel for Mid-Continent Petroleum Corporation in withdrawing their individual pleas to join in the defense outlined by Donovan.

Donovan, to the surprise of government attorneys and observers, demonstrated a particularly keen knowledge of the fine points of the law in challenging an apparent infraction of judicial procedure outlined by statute that had not been observed in this district since 1930. The same challenge could have been raised in hundreds of criminal cases here during the past several years, but Donovan was the first to question it.

In withdrawing his special plea, Denton indicated he would resubmit it in the event that Judge Stone rules in favor of the government on the issue raised by Donovan.

An indication as to the length of time it would require to try the cases was given at the close of Monday's hearing. Lewin estimated that it would take at least six weeks in each of the two indictments while Donovan was inclined to consider Lewin's estimate slightly conservative.

Charenton Purchase

[*Continued from page 13*]

& Refining Company, or The Texas Company, because Pan American Petroleum and Transport Company, the parent of the refining and of the producing subsidiaries, is only 87½ percent controlled by Standard of Indiana, which owns 100 percent of Stanolind Oil & Gas Company stock. On the other hand, while crude transferred from Pan American Production Company to Pan American Refining Company at Texas City or at Destrahan, Louisiana, might ostensibly change ownership at posted prices it would, after all, be furnished the refining subsidiary of Pan American Petroleum & Transport Company at a cost exactly equivalent to what it cost the producing subsidiary of the same organization to produce it. Hence, there is a distinct advantage to the immediate parent of Pan American Production Company in having the latter active in the Gulf Coast.

The block is not solid, but is severely cut into by holdings of Humble Oil & Refining Company, Windsor Oil Company and others. This in itself will assure further drilling in the area. As an added assurance of more drilling in 1936 and continued drilling in 1937, Pan American Production Company has not gotten its 67 lease owners to agree on a plan whereby each will share his or her acreage prorata of production on the whole 25,572-acre block. This means, in effect, that Pan American Production Company may find itself in the predicament of fighting an offset battle with itself with respect to drilling offsets to producing leases.

In closing, it is obvious that Pan American Production Company has been restricting practically all its purchases of acreage to good prospects or proven production. By "good prospects" is meant acreage presenting either pronounced geological characteristics of a nature favorable to the accumulation of oil, or plain geophysical interpretations as free from ambiguity as possible, or correlation of formations from logs of drilled tests.

Richfield Merger

[*Continued from page 13*]

line at Elwood. The aggregate of main and lateral lines acquired is approximately 500 miles. The company will have six marine terminals, 120 tank cars and approximately 300 automotive units.

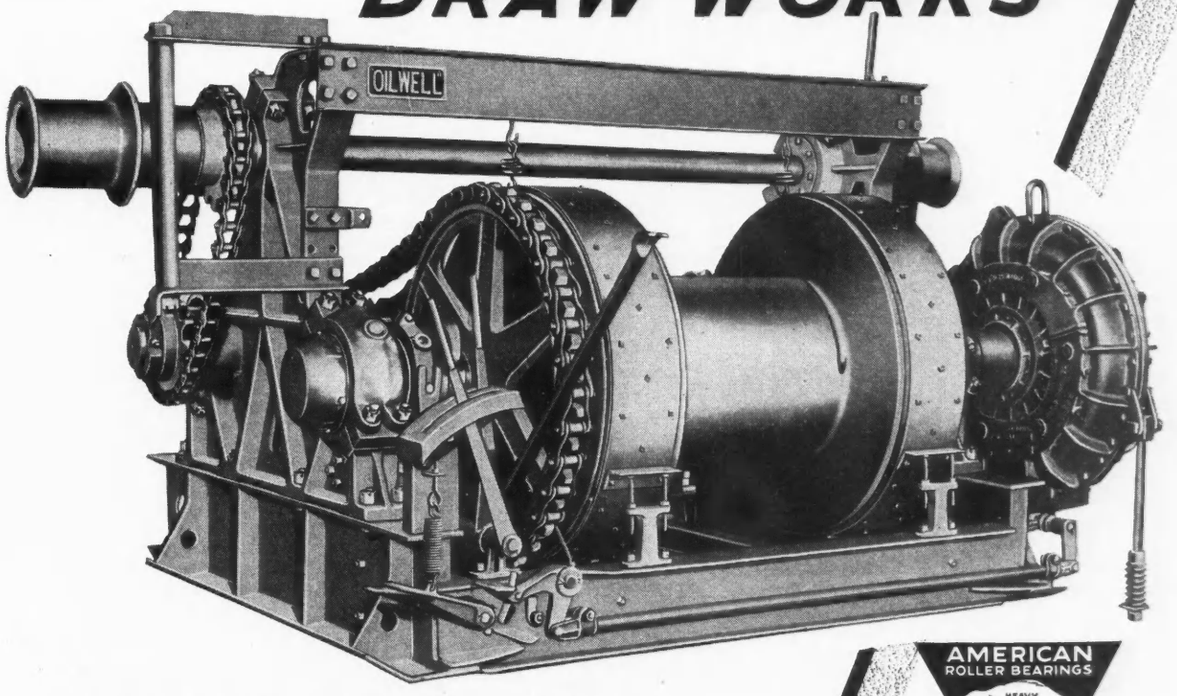
Gasoline made by Richfield Oil Company and Rio Grande Oil Company has been marketed through about 400 dealers and resellers, as well as company owned stations. The territory covered consists of California, Washington, Oregon, Arizona, Nevada, Utah, Montana, Idaho and British Columbia.

Production of Richfield Oil Corporation, the new firm, will be approximately 16,800 barrels daily, in addition to obligations to purchase. The old Richfield concern had 312 wells capable of making production and 83 shut in, but some of which may be suitable for reconditioning and put back into operation. Rio Grande Oil Company had 30 producing wells and a 50 percent interest in 31 more operated by Barnsdall Oil Company.

Aggregate storage facilities will be approximately 7,500,000 barrels, but it is not known how much oil is in stock. The new company will have seven tankers and four barges with a total carrying capacity of 510,000 barrels.

Directors of the new company will include Harry F. Sinclair, chairman, Consolidated Oil Corporation; George MacDonald, director, Consolidated Oil Corporation and Cities Service Company; P. H. O'Neil, director, Petroleum Corporation of America; W. Alton Jones, vice president, Cities Service Company; Charles S. Jones, president, Rio Grande Oil Company; F. R. Coates, president, Cities Service Company; Fred Bartlett, Pasadena; C. Parker Toms, chairman of the reorganization committee; H. R. Gallagher, president, Consolidated Oil Corporation; and William C. McDuffie, trustee and receiver for Richfield Oil Company and Pan American Petroleum Company.

HUSKY
DRAW WORKS



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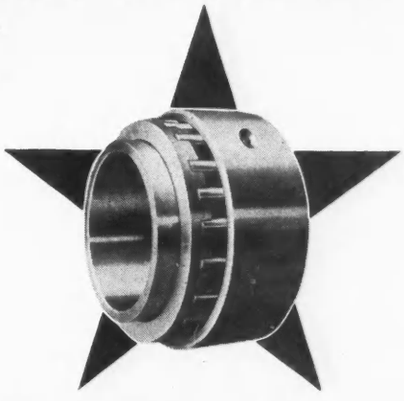
MUST HAVE
HUSKY BEARINGS

As loads become greater, and drilling speeds increase, the predominance of American Roller Bearings becomes even more apparent. These heavy-duty bearings are designed for the hard jobs, where rugged dependability counts. Thirty-one drilling-equipment manufacturers, including Oil Well, whose latest draw works is illustrated, use them as standard. American Roller Bearing Co., Pittsburgh, Pa.

Pacific Coast Office: **321 W. Pico St., Los Angeles, Calif.**



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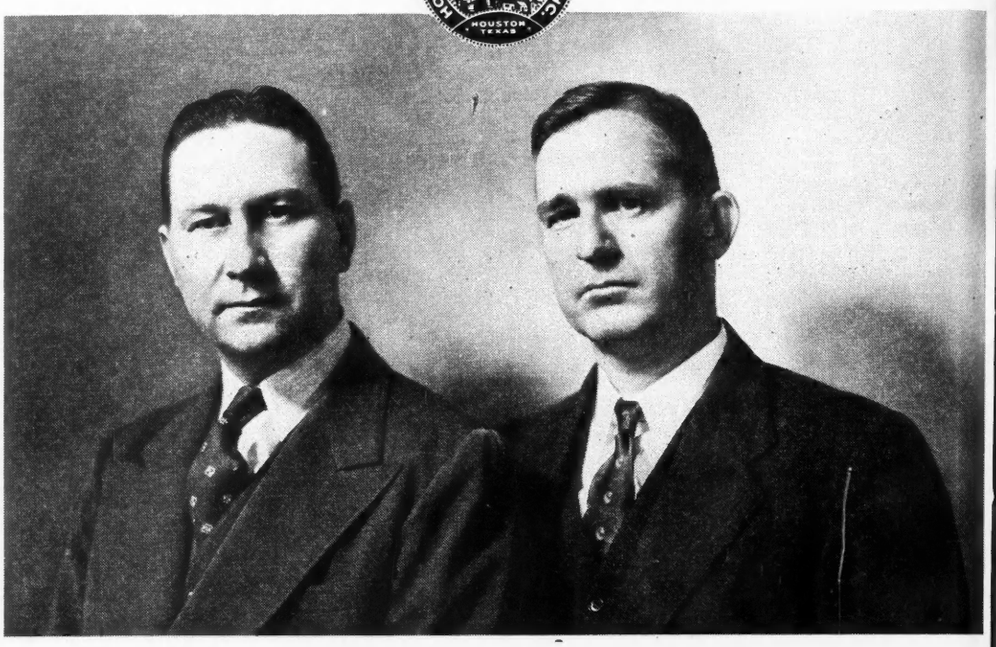
CUTTING AND FISHING TOOL DIVISION OF

"Our Gang"



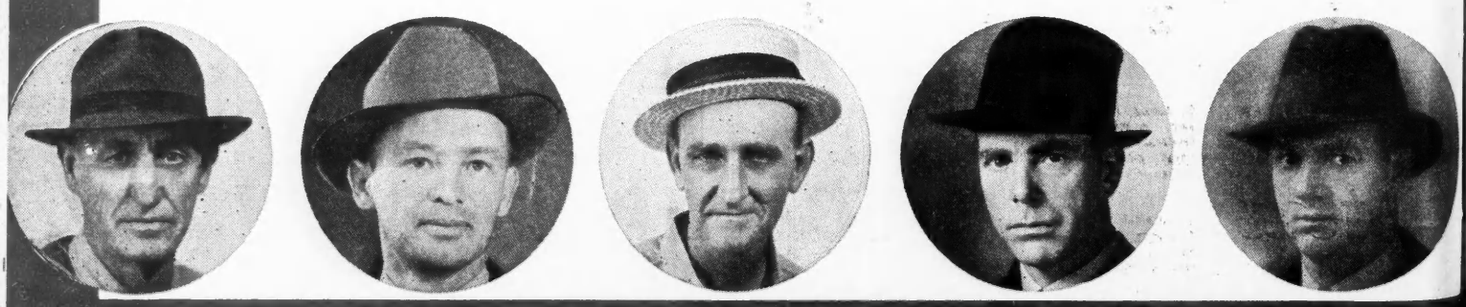
ED ROBERTSON, right,
HOMCO Executive
Vice-President

JIMMIE GREATHOUSE,
Superintendent, Cutting
Tool Division

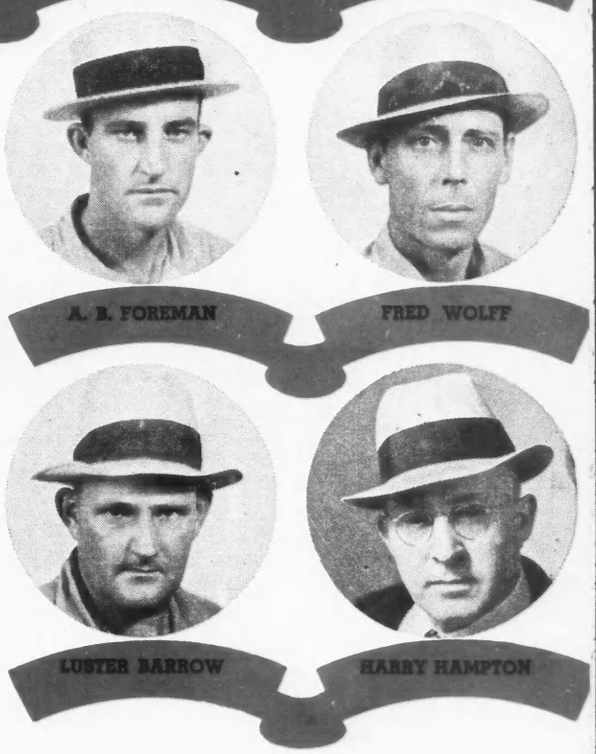
From a small group of practical field men, who saw fit to specialize in problems of pipe recovery in 1928, has grown the HOMCO Cutting and Fishing Tool Division, long since recognized as the largest organization of its kind in the world. This division of "Our Gang's" Service now has 21 men in the field, covering the Gulf Border Territory from the Mississippi River to the Rio Grande.

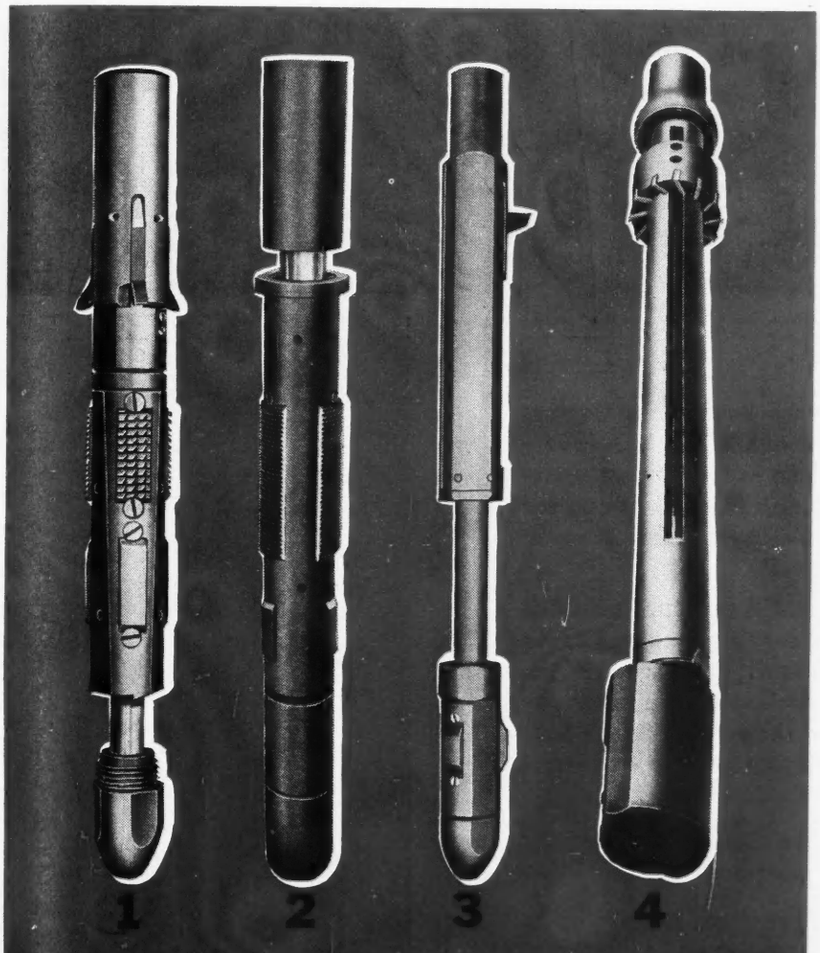
Cutting Tools, ranging from the midget size for running inside drill pipe to a size for the largest oil country casing, are employed. Releasing Spears and Overshots, to fit any type or size pulling job, back up the cutter line. The E. & W. Sidetracking Tool, for simplifying milling out of casing, is exclusively a HOMCO Service, and the CMP Perforator adds further to the wide variety of pipe problems the Cutting and Fishing Tool Division of "Our Gang" is regularly solving at a real profit to the customer. No cutting nor fishing job is too tough for "Our Gang."

All of these tools are fully patented.



EARL "BUD" DERR M. L. "TEX" RICHARDSON C. G. WHEELER V. D. "RED" DAVIDSON T. C. "TOMMY" SMITH





1. Free circulating weight Cutting Tool permits full circulation at all times.

2. Anti-Ball-Dog free slip releasing Spear insures against broken slips.

3. Long-hole Perforator, with circulation indicator, exposes action of tool in the hole.

4. Automatic feed Sidetracking Tool cuts the casing . . . not the whip-stock.

The 21 members of "Our Gang's" Cutting and Fishing Tool Division pictured here are oil field graduates, and came into this HOMCO Service with a wide range of practical well experience. They know what they're doing when they go on your trouble job.

HOMCO

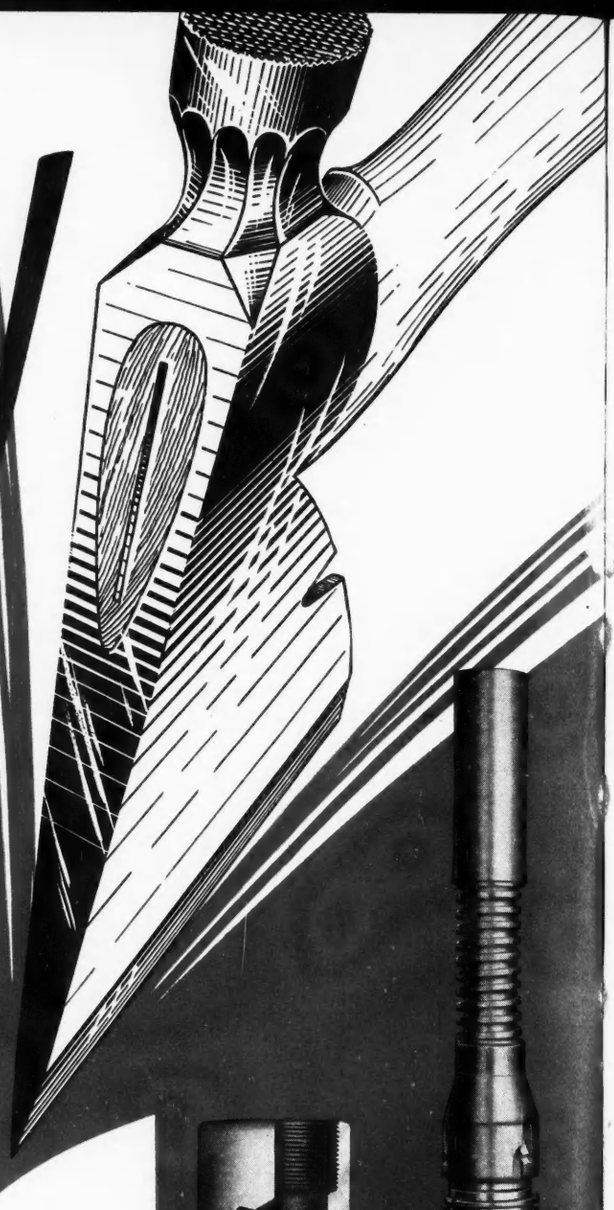
Houston Oil Field Material Co.

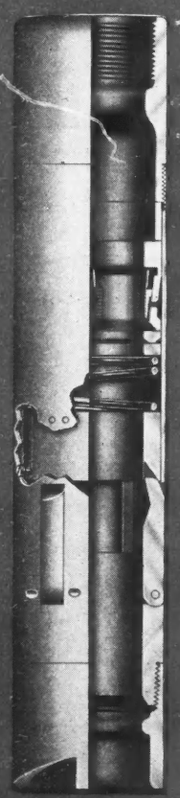
HOUSTON, TEXAS

BRANCHES: Kilgore, Talco, Victoria, Corpus Christi, Freer, Hebronville and Samfordyce, Texas. Rodessa, Lake Charles, Houma and New Iberia, La.

ALWAYS On the Job!

ON THE BAASH-ROSS DRILL PIPE AND CASING CUTTERS





External Drill Pipe Cutter with interchangeable slip assembly for cutting external flush joint drill pipe.

TO THOUSANDS of men these Baash-Ross Cutters are as familiar as the well-known hatchet. As automatically as they reach for the hatchet when something is to be cut on the derrick floor, they call for Baash-Ross Drill Pipe and Casing Cutters when a cutting job develops in the well.

In every active drilling field in the country you'll find an experienced Baash-Ross service man ready to come to your well, day or night. He will bring the right cutter, do his work efficiently, and save you time, money and worry. Call the nearest Baash-Ross office next time you have a cutting job—or write now for full information.

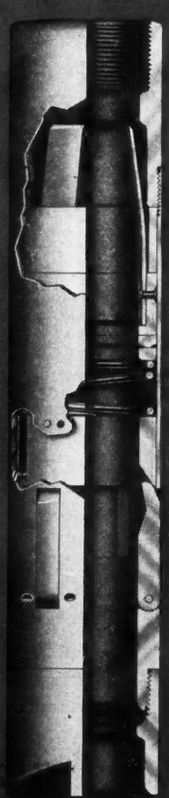
Baash-Ross Drill Pipe and Casing Cutters are sold for export only.

For Complete Description Refer to Your Composite Catalog

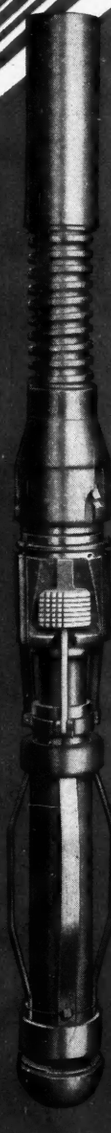
BAASH-ROSS TOOL COMPANY

Telephone 3-4406	*Telephone Fairfax 9363*	*General Offices:*	*Export Office:*
1559 S. E. 29th St.	5300 Clinton Drive	5512 Boyle Ave.	30 Church St.
OKLAHOMA CITY	HOUSTON	LOS ANGELES	NEW YORK, N. Y., U. S. A.

Gulf Coast Distributors: NORVELL-WILDER SUPPLY CO.



External Drill Pipe Cutter with overshot assembly for cutting drill pipe with ordinary tool joints and couplings.



Internal Casing Cutter. Made in all sizes for cutting casing, tubing and internal flush joint drill pipe.

Markets Stronger

HIGHER POSTINGS WILL BE ADOPTED IS CURRENT BELIEF

THE markets have continued strong, with rising tendencies, in the wake of the recent inauguration of a move toward higher crude oil prices.

Perhaps partially in anticipation of general adoption of higher crude postings immediately after the opening of the new year, both tank car and retail prices were advanced last week in some districts of the Mid-Continent. The increases involved gasoline, kerosene, and gas and fuel oils.

The past week did not bring any further announcements from crude oil purchasers as to postings after the beginning of the year. However, no immediate action was necessary, as the 17 cents a barrel increase for Mid-Continent crudes, scheduled by Continental Oil Company, and several other concerns, does not become effective until January 4.

It is widely believed that higher postings will be generally adopted, although it is not known whether other purchasers will agree to the amount of increase that has been proposed.

A factor that may stand in the way of ready adoption of higher crude postings is the prospect that December will bring less effective control of crude production, under allowables that have been prescribed by the various states. Whereas the states of the Mid-Continent previously were adhering closely to the Bureau of Mines allocations, they disregarded the allocations for December and prescribed allowables materially above the federal quotas.

Tank Wagon Prices Up

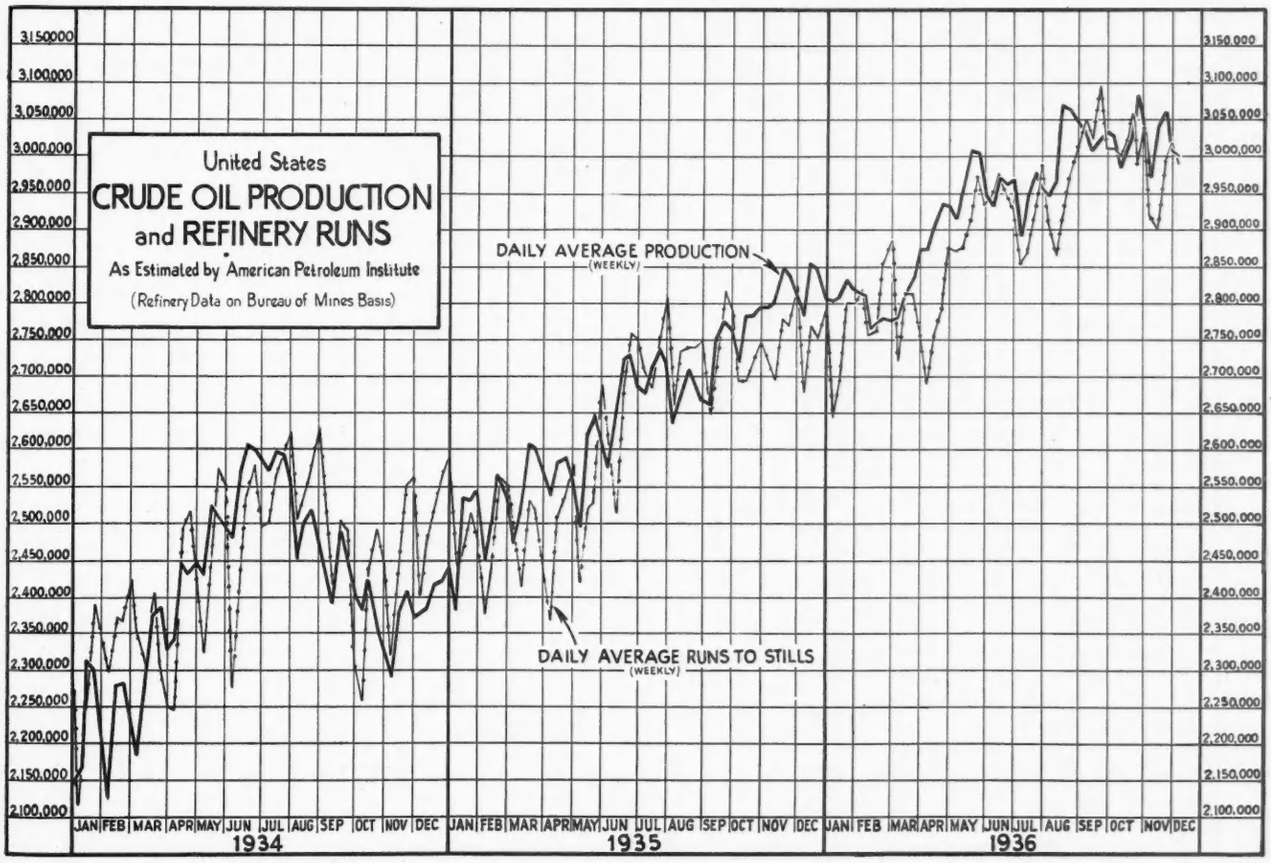
The strength of the gasoline market was evidenced when Standard Oil Company of Indiana advanced tank wagon prices three tenths of a cent a gallon, effective December 9, in Illinois, Indiana, Iowa, Kansas, Northern Michigan, Minnesota, Missouri, North Dakota, South Dakota, and Wisconsin.

Effective December 8, Standard Oil Company of New Jersey and Socony-Vacuum Oil Company met higher kerosene and fuel oil tank car prices previously posted by Sinclair Refining Company at Eastern seaboard terminals.

Better Tank Car Prices

Tank car prices of gasoline last week showed improvement generally. U. S. Motor gasoline below 62 octane, previously priced at 4¾ cents a gallon f.o.b. Oklahoma refineries, late last week was bringing 4⅞ cents in some instances, with some jobbers buying for storage, and with offerings relatively scarce. The 63 and 67 octane gasoline continued within the previous range of 5¼ to 5⅜ cents, but the 68 to 70 octane material, previously 5¾ cents, ranged up to 5⅞ cents.

In the Chicago market only the low octane classification showed improve-



United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in Dec.)	ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING December 12	December 5
TEXAS—			
Texas Panhandle	.....	63,400	63,500
North Texas	.....	66,500	64,600
West Central Texas	.....	34,900	33,600
West Texas	.....	163,600	152,700
East Central Texas	.....	83,800	77,100
*East Texas Field	.....	445,100	444,100
South Texas	.....	181,200	170,500
Texas Gulf Coast	.....	165,300	152,200
*Total Texas	1,145,200	1,203,800	1,158,300
OKLAHOMA—			
Oklahoma City	.....	164,900	113,575
Seminole Area	.....	132,300	132,275
Tatums	.....	3,600	3,650
Lucien	.....	12,500	12,350
Fitts	.....	65,475	60,600
Edmond	.....	15,425	9,375
Others	.....	198,000	197,275
Total Oklahoma	567,000	592,200	529,100
KANSAS—			
Ritz-Canton	.....	6,325	5,875
Voshell	.....	2,775	2,800
Nikkel-Hollow	.....	3,600	3,700
Sedgwick	.....	4,950	4,625
Burrton-Haury	.....	14,275	13,200
Lorraine	.....	5,700	5,575
Oxford	.....	3,150	2,975
Others	.....	131,725	121,450
Total Kansas	155,900	172,500	160,200
LOUISIANA—			
North Louisiana	.....	78,450	79,525
Louisiana Gulf Coast	.....	159,200	158,200
Total Louisiana	204,800	237,650	237,725
ARKANSAS	26,800	27,750	27,350
CALIFORNIA—			
Long Beach	.....	64,500	65,000
Santa Fe Springs	.....	45,500	43,500
Huntington Beach	.....	36,500	35,500
Dominguez	.....	23,500	25,000
Inglewood	.....	14,000	11,000
Ventura Avenue	.....	35,000	35,000
Seal Beach	.....	7,500	9,000
Midway-Sunset	.....	72,000	63,000
Elwood	.....	10,500	11,000
Kettleman Hills	.....	77,500	77,000
Mountain View	.....	21,500	20,000
Playa del Rey	.....	11,000	11,000
Others	.....	174,000	165,000
Total California	553,400	593,000	571,000
MOUNTAIN STATES—			
Wyoming	40,200	45,300	43,600
Montana	14,300	18,000	17,900
Colorado	4,500	3,600	3,500
Total Rocky Mountain States	59,000	66,900	65,000
NEW MEXICO	78,300	85,800	83,400
EASTERN STATES	110,600	114,600	113,400
MICHIGAN	29,300	29,800	29,700
*Total United States	2,930,300	3,124,000	2,975,175
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	.....	10,000	10,000
Grand Total, including surreptitious production	.....	3,134,000	2,985,175

ment, ranging from 4⅝ to 4⅞ cents, while the 63-67 octane continued at 5 to 5¼ cents and the 68-70 octane at 5½ to 5⅞ cents.

In East Texas the third grade gasoline, most common product, continued at 4⅝ cents a gollon, where supported by federal tenders.

Kerosene Shows Gains

Kerosene tank car prices were generally one-eighth cent a gallon higher late last week than in the previous week. In both the Oklahoma and the Chicago markets, the 41-43 water white grade ranged from 3⅝ to 3¾ cents a gallon, and the 42-44 water white grade from 3¾ to 3⅞ cents.

Burning oils similarly were generally up one-eighth cent late last week. In the Oklahoma market the No. 1 white oils ranged from 3½ to 3¾ cents a gallon and the No. 2 oils from 3⅜ to 3½ cents. Corresponding prices in the Chicago market were 3⅜ to 3⅝ cents and 3⅛ to 3⅜ cents.

ALL TIME PEAK

3,124,000 barrels daily is nation's production

UNITED STATES crude oil production rose last week to a new all time peak, exceeding by 40,950 barrels daily the previous peak that was set in late October; for the week ended December 12 the nation's crude output averaged 3,124,000 barrels daily, according to the regular estimates compiled by THE OIL WEEKLY.

That was 148,825 barrels a day more than the output in the previous week, and 193,700 barrels a day more than the Bureau of Mines recommendation.

The sharp increase over the previous week reflected the increased allowables that have been prescribed for December by the leading producing states.

Texas and Oklahoma

Large increases occurred in Texas and Oklahoma, and important gains were recorded for California and Kansas. New Mexico also showed an increase. Louisiana's output was down very slightly.

Texas last week averaged 1,203,800 barrels daily. That was 45,500 barrels a day more than in the previous week and 58,600 barrels a day more than the Bureau of Mines recommendation, which the Texas allowables disregard.

Oklahoma production last week averaged 592,200 barrels daily, an increase of 63,100 barrels over the previous week and 25,200 barrels a day more than the Bureau of Mines allocation.

California output rose 22,000 barrels to 593,000 barrels daily, and was approximately 40,000 barrels a day above the federal quota.

Kansas last week averaged 172,500 barrels daily, or 12,300 barrels a day more than in the previous week, and 16,600 barrels a day more than the Bureau of Mines recommendation.

New Mexico production was up 2400 barrels in averaging 85,800 barrels a day last week. That was 7500 barrels a day more than the bureau recommendation.

CONTRACT FOR CRUDE
Deals involve Rodessa-East Texas deliveries

CONTRACTS involving the delivery of large quantities of high-gravity crude from the Rodessa and East Texas fields have been signed lately by major purchasers in an effort to meet their 1937 requirements. United Pipe Line Company, which affords a major outlet for Rodessa crude produced by affiliated units, has negotited its third large contract that calls for delivery of oil to the East Texas field, thereby removing the only weak spot on the Rodessa market.

United Pipe Line Company's latest crude sale calls for the delivery of 4000 barrels daily effective January 1, 1937, to Shell Petroleum Corporation, and on April 1, 1937, deliveries are to be increased to 10,000 barrels daily for the remainder of the year. Previous announcement has been made regarding the sale of 7500 barrels daily to Atlantic Petroleum Purchasing Corporation for one year beginning January 1, 1937. The two purchasers are to pay the posted price, plus 15-cents-per-barrel gathering and trunk-line tariffs, for Rodessa oil delivered through United Pipe Line Company's 8-inch trunk line that terminates at Falvey station on the east side of the East Texas field. United Pipe Line Company began constructing early last week about 8 miles of 8-inch line from Falvey station to Atlantic Pipe Line Company's Horton station and to Shell Pipe Line Corporation's Kinsloe station, located about one-mile apart. The latter two carriers will move the purchased oil to the Texas coast in alternate batches with East Texas crude. United Pipe Line Company is also contracted to supply from 2000 to 5000 barrels of Rodessa crude daily for 2 years to the East Texas Refining Company, owner of a refinery at Longview junction, as part consideration for the Rodessa-East Texas trunk line.

Atlantic Petroleum Purchasing Corporation is credited with having contracted to purchase 3000 barrels of East Texas crude daily from American Liberty Pipe Line Company for 8 months beginning January 1, 1937. The latter will receive posted price, plus transportation to the coast.

Stanolind Oil & Gas Company has contracted to sell 227,500 barrels of East Texas crude during the current month to Pure Oil Company. This oil will be obtained from the former's properties in the Longview section of the field, and gathered by Yount-Lee Pipe Line Company, a subsidiary, then moved to Smiths Bluff via Sun Pipe Line Company's carrier.

Comparison of Permits Granted for New Wells

STATE	Week Ending Dec.	Total this Mo.	Total this Year	Total this Date Last Year	1935 Year Total
Arkansas.	3	4	97	64	70
California.	13	44	1,008	938	925
Louisiana.	11	35	1,080	815	846
Kansas...	30	72	1,771	1,164	1,204
Michigan.	21	40	740	712	749
Oklahoma	61	116	2,467	2,230	2,311
Texas....	215	368	14,970	10,503	10,800
Total..	354	679	22,133	16,426	16,964

CORPUS EXPANDING
Refinery and gasoline plants announced

Corpus Christi. — Pipe line and refinery projects, which have placed Corpus Christi in the limelight as one of the outstanding new crude oil ports, continue to be announced. Barnsdall Oil & Refining Company is the latest to propose a plant for this area. At the same time, two new pipe lines and one gasoline plant have been commenced.

J. S. Noland, representing the Barnsdall concern, was in Corpus Christi inspecting properties and announced that this organization contemplated construction of a refinery to have a capacity of about 10,000 barrels per day, and costing about $1,000,000 or more. The plant would be erected if a suitable site could be obtained along or near the ship channel.

Magnolia Pipe Line Company has commenced preliminary work on its 85-mile, 8-inch line from Tilden Station on the Duval-McMullen County line to a point on the Corpus Christi ship channel, where it will connect with a new terminal to be built by this concern, or to a terminal now in operation. The line will handle Mirando district crude, which is congesting the company's cross state system to Beaumont. Two 80,000-barrel tanks are being erected at the Tilden station.

C. and S. Pipe Line Company, which recently announced plans for the construction of a 5½-inch line from the Bentonville district in Jim Wells County, to the Corpus Christi ship channel, 45 miles, has commenced preliminary work on the line and has begun actual construction on the field pump station and storage facilities. It will connect with a terminal at the channel.

Humble Pipe Line Company is rushing completion of its Flour Bluff-Viola pipe line project, which will give this field an outlet to the company's trunk line to Inglesides, also in the Corpus Christi port group.

Southern Minerals Corporation has let contracts for the construction of a 25,000,000 cubic foot absorption type gasoline plant in the Saxet field, which will be used to process wet gas now being popped into the air from the 5800-foot sand wells. A 10-inch gathering system will be constructed into the field and a 3½-inch line will carry the fluid from the plant to the terminal of Hanlon-Buchanan, Inc. Southern Pipe Line Company, an affiliate of the mineral concern, has started construction on another 80,000-barrel storage tank at its Avery Point terminal to handle an ever increasing demand for storage.

REOPEN LINE ISSUES
Interstate commission widens rate inquiry

WASHINGTON, Dec. 11. REOPENING of its investigation into the lawfulness of certain reduced rates and gathering charges established for the interstate movement of oil by pipe line was ordered this week by the Interstate Commerce Commission.

It was explained that hearings had been held and oral argument heard but that request had been made by

Summary of Wells Completed in the United States Week Ending December 12, 1936

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1936	Total Completions this Date 1935
Alabama	....	....	....	....	.....	2	4
Arkansas	2	1	....	1	175	90	120
California	17	15	....	2	6,295	1,063	814
Colorado	....	....	....	....	.....	18	11
Florida	....	....	....	....	.....	2	....
Illinois	....	....	....	....	.....	4	9
Indiana	....	....	....	....	.....	165	173
Kansas	32	22	....	10	30,671	1,622	1,330
Kentucky	11	5	....	6	133	267	169
Louisiana	20	13	1	6	4,026	970	696
Michigan	14	1	4	9	140	742	563
Mississippi	....	....	....	....	.....	8	19
Montana	11	10	1	....	1,329	189	166
Nebraska	....	....	....	....	.....	1	....
New Mexico	14	13	1	....	14,904	547	283
New York	....	....	....	....	.....	....	....
Ohio	49	13	24	12	569	1,859	1,459
Oklahoma	48	34	3	11	43,746	2,738	2,312
Pennsylvania	....	....	....	....	.....	122	....
Texas	267	212	8	47	282,575	12,073	11,210
Utah	....	....	....	....	.....	....	1
West Virginia	17	....	16	1	.....	598	575
Wyoming	7	6	....	1	1,871	93	69
Total this week..	509	345	58	106	386,434	23,051	20,011
Total last week..	516	329	46	141	415,126	....	....
Total this year...	23,051	15,486	2,170	5,395	21,349,336	....	....

Crude Runs to Stills; Stocks of Finished and Unfinished Gasoline and Gas and Fuel Oil, and Cracked Gasoline Production, Week Ended December 5, 1936

(Figures in thousands of barrels of 42 gallons each as reported to American Petroleum Institute)

DISTRICT	Daily Refining Capacity			Crude Runs to Stills		Stocks of Finished and Unfinished Gasoline				Stocks of Gas and Fuel Oil			Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
						Finished										
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Terms. Trans. Pipe Lines	Unfinished in Naphtha Distillates	Total Finished and Unfinished	Gas Oil & Distillates	Residual Fuel Oil	Total	Potential Rate	Reporting		Daily Average
		Total	%											Total	%	
East Coast	612	612	100.0	554	90.5	4,643	9,057	785	14,485	5,671	5,792	11,463	534	534	100.0	124
Appalachian	154	146	94.8	103	70.5	887	1,086	237	2,210	352	305	657	79	78	98.7	20
Ind., Ill., Ky.	475	457	96.2	409	89.5	4,337	3,409	673	8,419	2,991	2,971	5,962	349	348	99.7	129
Okla., Kans., Mo.	453	384	84.8	254	66.1	3,011	2,191	399	5,601	1,164	2,255	3,419	256	228	89.1	74
Inland Texas	330	160	48.5	106	66.3	1,423	91	222	1,736	405	1,364	1,769	148	105	70.9	30
Texas Gulf	732	710	97.0	637	89.7	5,192	250	1,872	7,314	3,754	4,132	7,886	399	393	78.5	158
Louisiana Gulf	169	163	96.4	134	82.2	904	355	196	1,455	1,060	846	1,906	77	74	96.1	32
North La.,—Ark.	80	72	90.0	49	68.1	175	66	42	283	191	353	544	46	44	95.7	9
Rocky Mountain	97	60	61.9	39	65.0	791	.....	95	886	207	562	769	46	39	84.8	10
California	852	789	92.6	484	61.3	8,500	2,119	1,170	11,789	.....	.....	73,650	280	280	100.0	76
Reported	.....	3,553	89.9	2,769	77.9	29,863	18,624	5,691	54,178	.....	.....	108,025	.....	2,123	95.9	662
Estimated Unreported	.....	401	.....	221	.....	1,882	865	771	3,518	.....	.....	2,262	.....	91	.....	48
*Estimated Total U. S. December 5, 1936	3,954	3,954	.....	2,990	.....	31,745	19,489	6,462	57,696	.....	.....	110,287	2,214	2,214	.....	710
*Estimated Total U. S. November 28, 1936	3,954	3,954	.....	3,020	.....	†31,859	†18,785	†6,729	†57,373	.....	.....	†112,012	2,114	2,214	.....	710
U. S. B. of M., *December 5, 1935	.....	.....	.....	‡2,742	.....	28,573	18,424	5,799	52,796	.....	.....	108,063	.....	.....	.....	‡580

* Estimated Bureau of Mines basis. ‡ December, 1935, daily average. † Revised. Comparable with week December 5th but not prior weeks.

certain of the parties to the case for further hearings.

In continuing the proceedings the commission widened the issues involved to include the legality and lawfulness of each and all rates, charges, rules, regulations and practices affecting the interstate transportation of oil by pipe line and ordered the companies to submit verified replies by March 11, next, to questionnaires already distributed, covering 1934 and 1935 and the first 9 months of 1936.

RODESSA GATHERING

Shreveport, La.—United Pipe Line Company is enlarging its gathering system in the Rodessa field to be prepared to handle a maximum of 30,000 barrels of controlled and purchased oil daily. The erection of two 55,000-barrel tanks and an 80,000-barrel tank has been started on its station site on the Simpson tract, Jas. Young Survey, Cass County, Texas. The company recently made contracts to sell large quantities of oil during the coming year to Atlantic Petroleum Purchasing Corporation and Shell Petroleum Corporation, and will deliver to the latter in the East Texas field.

OPERATING REGULAR

Gainesville, Texas.—Gainesville Refining Company's 1500-barrel refinery at Gainesville is now on regular schedule. G. A. Mattson is refinery superintendent.

EMPLOYEE BONUSES

Humble raises wage and makes other benefits

Houston. — Humble Oil & Refining Company and Humble Pipe Line Company have proposed wage and salary increases of five percent for all employes whose annual compensation is now less than $5,000, such increases to become effective as of December 1, 1936.

Coincident with the announcement of the pay raises, officials made known the fact that the company will make additional contributions to the existing Humble Annuity & Thrift Plan, which was inaugurated January 1, 1936, to supersede the Humble Employes' Stock Purchase Plans and the 1932 Annuity Plan. It is primarily a thrift program to encourage periodic savings; offering opportunity to buy additional life insurance, build up insurance company annuities at group rates, to purchase company stock, or to accumulate savings in cash, any one or all of the options being open to participants. All Humble employes, who on January 1, 1936, were accredited with one or more years' continuous, active service were eligible to enter the Humble Annuity & Thrift Plan and nearly 90 percent of those who were eligible entered. Those who entered were given the right to invest any amount from three percent to 13 percent of their current pay into the plan. Humble companies agreed to match the first three percent of employes' contributions into the plan with an equal amount of money, and to match the amount of employes' contributions in excess of three percent of current pay with a contribution equal to fifty cents for each dollar contributed by employes.

In its announcement today, Humble officials revealed that an amount equivalent approximately to two weeks of the entire payroll of all employes who on October 31, 1936, had as much as one year's continuous active service had been set aside. Out of this sum an amount equivalent to one week's pay will be placed to the credit of each eligible employe, regardless of whether or not he participates in the Annuity & Thrift Plan. The remaining amount will be credited as a Company Additional Contribution to the Annuity & Thrift Plan and will be credited under that feature to the individual accounts of the participants in the Plan pro rata on the basis of the total employe and Company regular contributions made to the credit of participants.

Mount Pleasant, Texas.—Talco Pipe Line Company, Dallas, has completed construction work on its 15-mile 5½-inch welded crude line, extending from tank farm and booster station in the Talco field to Mount Pleasant, where connection is made with tank car rack on the main line of the Cotton Belt Railroad. The company is nearing completion on the erection of two 55,000-barrel steel storage tanks at the Mount Pleasant terminal, which will also be the site of a complete cracking and skimming plant proposed by the Premier Asphalt Company, an affiliated unit.

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to December 11, 1936)

DISTRICT	Bottom Grav.	Dif.	Top Grav.	Date
Oklahoma-Kansas	28—$0.94	2¢	40—$1.18	1- 9-36
N. and N.-C. Texas	28— .84	2¢	40— 1.08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Andrews, Crane, Crockett, Ector, Glasscock, Howard, Winkler, Upton	29— .76	2¢	36— .90	1-14-36
Pecos	* .85			1-14-36
West Central Texas	28— .84	2¢	40— 1.08	1- 9-36
East Central Texas	28— .91	2¢	40— 1.15	1- 9-36
East Texas	*1.15			1- 9-36
Talco	* .65			11-1-36
Rodessa	*1.10			1- 9-36
Texas Gulf Coast				
Anahuac - Dickinson, Flour Bluff, Turtle Bay	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1.34	1- 9-36
Tomball, Satsuma	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull, Liberty, Orange, Pierce Junction, Barbers Hill, Raccoon Bend, Sugarland, West Columbia, Thompsons, Mykawa, Amelia, Plymouth, Quintana-O'Connor,	Below			
North Quintana	17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	* .95			11- 1-36
Greta (Heavy)	* .95			11- 1-36
Saxet (Light)	*1.22			10- 1-36
Saxet (Heavy)	* .95			11- 1-36
Taft (Heavy)	* .95			11- 1-36
Mirando	* .90			11- 1-36
Pettus	*1.25			1- 9-36
Salt Flat	* .97			1-14-36
Darst Creek	* .97			1-14-36
Placedo (Heavy)	* .90			11- 1-36
Placedo (Light)	* .95			4- -36
Port Lavaca	* .97			
Heyser (Light)	*1.15			11-1-36
Heyser (Heavy)	* .90			11-1-36

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Bottom Grav.	Dif.	Top Grav.	Date
Arkansas				
El Dorado (Light) and Rainbow	25—$0.78	2¢	40—$1.10	1-10-36
El Dorado East Field and Smackover	* .75			1-10-36
North Louisiana	25— .78	2¢	40— 1.10	1-10-36
Urania	* .97			1-10-36
South Louisiana	Below			
Lockport	19— .92	2¢	34— 1.22	1- 9-36
Iowa Cameron Mds.	19— .82	2¢	34— 1.12	1- 9-36
Lafitte	*1.12			11- 1-36
Rocky Mountain States				
Salt Creek	29— .94	2¢	40— 1.18	1-10-36
Elk Basin	*1.18			7-20-36
Frannie (Light)	* .70			11- 4-36
Frannie (Heavy)	* .62			11- 4-36
Grass Crk., Wyo., (Light)	*1.18			7-20-36
Grass Creek (Heavy)	* .62			11- 4-36
Hamilton Dome	* .57			11- 4-36
Big Muddy	*1.11			1- 9-36
Rock Creek, Wyo.	*1.08½			11- 1-36
Sunburst	*1.15			6- 5-36
Lance Creek	* .90			1- 9-36
Osage	*1.08			
Cat Creek	*1.07			8-25-33
Cut Bank	*1.35			6- 3-36
Ponders	*1.05			9-29-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	29— .76	2¢	36— .90	1-14-36
Mid-West States				
Lima	*1.15			9-18-36
Illinois	*1.23			1- 9-36
Princeton	*1.23			1- 9-36
Western Kentucky	*1.28			11-1-36
Pennsylvania				
Bradford	*2.45			1-13-36
Sw. Pa. Pipe Line	*2.17			1-13-36
Eureka Pipe Line	*2.12			1-13-36
Buckeye Pipe Line	*1.97			1-13-36
Corning Grade	*1.32			9-18-36
Michigan				
Central Michigan	*1.32			9-16-36
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33
Mexico				
F.O.B. Tampico (Net)	‡0.895			

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.
‡ U. S. Currency, buyer pays tax.

MAJOR PRICE CHANGES

	Penns. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut *‡
September 6, 1935	Up 5	.....	.....
October 29, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up *‡0
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up *‡
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....
February 26, 1936	.....	.....	Up 15

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

TEXAS—2¾ cents or 2¾ percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅛ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

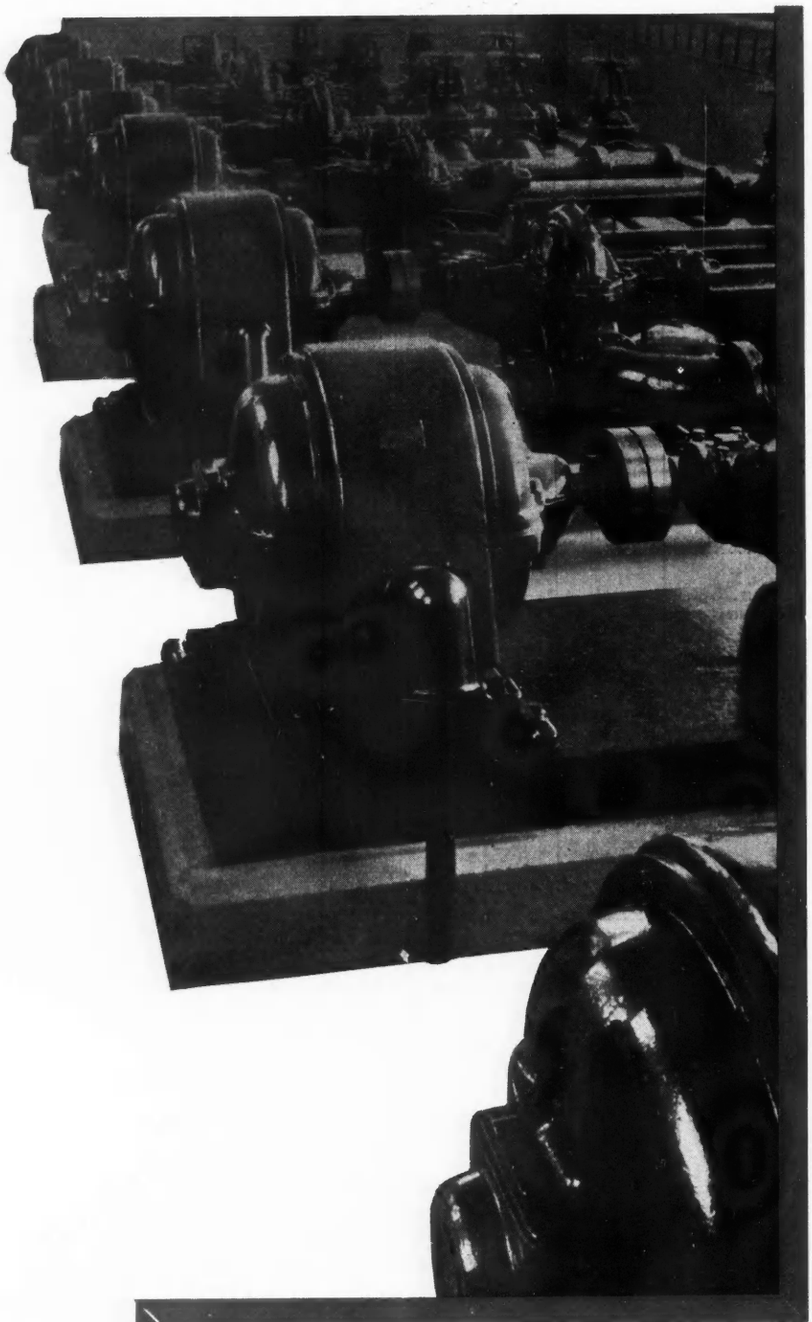
* All gravities—flat rate.
‡ Signal Hill 26 gravity.
‡ Seal Beach 26 gravity.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field. Effective February 26, 1936)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans	Elwood Torrance	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs	New Hall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Buena Vista Hills Elk Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$.80	$.79	$.78	$.79	$.80	$.76	....	....	$.80	$.76	$.76	$.77	$.78	.....	$.70	....	$.70	$.70	$.70	....
15-15.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
16-16.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
17-17.9	.80	.79	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
18-18.9	.80	.79	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
19-19.9	.82	.79	.82	.87	.84	.81	....	....	.85	.76	.78	.77	.78	.....	.70	$.70	.74	.74	.71	$.70
20-20.9	.85	.79	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	.....	.....	.70	.78	.78	.72	.70
21-21.9	.88	.79	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	$.78	.....	.73	.82	.82	.74	.70
22-22.9	.92	.82	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	.....	.77	.87	.86	.78	.72
23-23.9	.95	.86	.96	.99	1.02	.96	$.84	....	.96	.88	.93	.82	.92	.78	.....	.80	.92	.90	.82	.76
24-24.9	.99	.91	1.00	1.02	1.06	.99	.88	....	.99	.91	.96	.85	.96	.82	.....	.84	.97	.94	.86	.79
25-25.9	1.03	.95	1.03	1.05	1.11	1.03	.93	....	1.02	.95	....	.89	.99	.86	.....	.88	1.01	.98	.90	.83
26-26.9	1.06	1.00	1.07	1.09	1.16	1.06	.98	....	1.05	.98	....	.92	1.03	.90	.....	.91	1.06	1 02	....	....
27-27.9	1.10	1.05	1.11	1.12	....	1.10	1.03	....	....	1.02	....	.96	1.06	.95	.....	.95	1.10	1.06	....	....
28-28.9	1.14	1.10	1.14	1.15	....	1.14	1.07	....	....	1.06	....	.99	1.10	.99	.....	.99	1.15	1.10	....	....
29-29.9	1.17	1.15	1.18	1.18	F.O.B.	1.17	1.12	....	....	1.09	....	1.03	1.14	1.03	.....	1.02	1.20	1.14	....	....
30-30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	F.O.B.	....	....	....	1.07	1.17	1.08	.....	1.06	1.25	1.18	....	....
31-31.9	....	.....	....	1.24	Line	1.24	1.22	Ship	Kettleman Hills			1.11	1.21	1.12	.....	1.09	1.29	....	....	....
32-32.9	....	....	....	1.27	....	1.27	1.27	....				1.14	1.25	1.16	.....	1.13	1.34	....	....	....
33-33.9	....	....	....	....	....	....	1.32	$.128		1.19		1.18	1.28	1.20	.....	1.17	1.38	....	....	....
34-34.9	....	....	....	....	....	....	1.37	1.32	....	1.23	....	1.22	1.32	1.25	.....	1.20	.....	....	....	....
35-35.9	....	....	....	....	....	....	1.42	1.35	....	1.27	....	1.25	....	1.29	.....	....	.....	....	....	....
36-36.9	....	....	....	....	....	....	1.46	1.39	....	1.31	....	1.29	....	1.33	.....	....	.....	....	....	....
37-37.9	....	....	....	....	....	....	1.51	1.43	....	1.35	....	1.32	....	1.37	.....	....	.....	....	....	....
38-38.9	....	....	....	....	....	....	1.56	....	....	1.39	....	1.36	....	1.42	.....	....	.....	....	....	....
39-39.9	....	....	....	....	....	....	1.61	....	....	1.43	....	1.40	....	.....	.....	....	.....	....	....	....
40-40.9	....	....	....	....	....	....	1.66	....	....	....	....	1.43	....	.....	.....	....	.....	....	....	....

Good Soldiers!



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FOSTER ELECTED
Chairman Mid-Continent association tax work

Dallas.—Annual meeting of standing committees of the general Mid-Continent Oil and Gas Association's tax division was held here December 7 and 8. George W. Foster, The Texas Company, Houston, was elected general chairman of the executive committee on state and local taxation, succeeding Glen E. Thompson, Tide Water Associated Oil Company, Tulsa. F. B. Plank, Empire Oil & Refining Company, Bartlesville, was re-elected general chairman of the executive committee on federal income and excise taxation.

Congressman Wesley E. Disney, Tulsa, was guest speaker at the annual banquet. The tax men were also addressed by J. D. Collet, Fort Worth, president of the general Mid-Continent Oil and Gas Association.

H. D. Mahin, Phillips Petroleum Company, Bartlesville, was elected vice chairman of the executive committee on federal income and excise taxation. Members of this committee for the ensuing year includes: V. G. Gillingham, The Texas Company, Houston; S. M. Greenidge, Texas Pacific Coal & Oil Company, Fort Worth; H. F. See, Atlantic Refining Company, Dallas; J. A. McNeese, Continental Oil Company, Ponca City; Fred B. Branson, Gulf Oil Corporation, Tulsa; Gay Carroll, Humble Oil & Refining Company, Houston; R. W. Clark, Skelly Oil Company, Tulsa; M. J. Lasseigne, Arkansas Natural Gas Company, Shreveport; T. H. Marshall, Anderson-Prichard Oil Corporation, Oklahoma City; and G. L. Tate, Magnolia Petroleum Company, Dallas.

A. J. Wells, Carter Oil Company, Tulsa, was elected vice chairman of the executive committee on state and local taxation. The following were designated as chairman of the respective state steering committee: Dan D. Harley, Ohio Oil Company, Tulsa, for Oklahoma; C. C. Deardorf, Shell Petroleum Corporation, Tulsa, for Kansas; H. L. Stone, Humble Oil & Refining Company, Houston, for Texas; M. J. Lasseigne for Louisiana and Arkansas; F. N. Shriver, Shell Petroleum Corporation, Houston, for New Mexico; John P. Morgan, Sun Oil Company, Dallas, for Mississippi; Leo Meyer, Mid-Continent Petroleum Corporation, Tulsa, for outside states; and J. A. McNeese for the all-states excise tax steering committee.

The general steering committee chairman includes: Leo Austin, Mid-Continent Petroleum Corporation, Tulsa, for federal income and capital stock taxes; John Cullen, Continental Oil Company, Ponca City, for federal excise tax.

John W. Campbell, Mid-Continent Oil and Gas Association, was re-elected general secretary.

Tyler, Texas.—The East Texas field accounted for 50 flowing and pumping wells the past week, as compared to 49 completions the previous week. Majors contributed 30 completions on the current report. A survey of field operations reveals about 60 rigs in active service, and in all probability completions during the remainder of the year will boost the total number of wells slightly above 22,000.

NEW OIL DISCOVERIES

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built according to the latest ideas in drilling equipment

Absolute dependability Practically noiseless transmission of motive power through top-grade toothed-wheel gearing of high efficiency.

Clear derrick floor permits unhampered working. No foundations for machines. Derrick can be shifted without having to dismantle the drilling aggregate.

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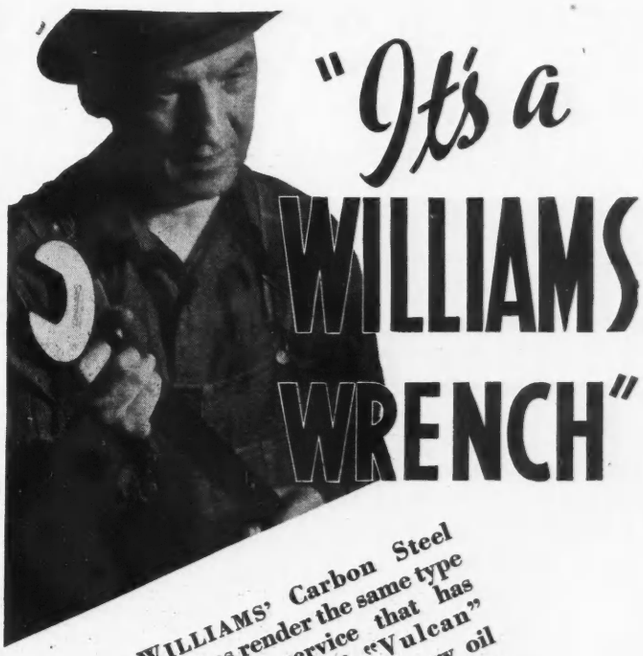

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"SUPERSOCKETS"

All **ARE FULLY GUARANTEED**

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

Edited by
WM. V. GROSS, Associate Editor

Petromex Grows

CONTRACTS FOR EXTENSIVE DRILLING IN 1937 AWARDED

PROGRESS that converted the enterprise from a weak business into one that is in a position to compete with foreign oil companies on the Mexican market was made by the Compania de Petroleos de Mexico, S.A. (Petromex), the semi-official, integrated petroleum company of Mexico, since it began operations February 1, 1935, asserts the company's report for the fiscal year, July 1, 1935, to June 30, 1936. The report has inspired much interest in local foreign oil circles.

Petromex declares it expects soon to be able to control at least 50 percent of the gasoline business of the Federal District, which includes this city, and adjoining communities, the region of the bulk of Mexico's population. During the period of the report, Petromex's crude production increased from 1097 barrels daily to 5000 barrels a day, and the daily gasoline output rose from 15,000 liters (3.7853 liters equal an American galion) to 120,000 liters. For refining purposes, Petromex had to buy 415,247.68 barrels of oil from other companies at a cost of $234,904.80. This buying is no longer necessary, for the production of the company's greatest well, Petromex 5, in the Poza Rica zone, Vera Cruz state, is sufficient for refinery requirements.

The company anticipates a daily gasoline production of 200,000 liters by the end of this year. That will be about one fifth of what the national gasoline consumption was in 1935, some 350,000,000 liters. The government sees a gasoline use of upward of 410,000,000 liters this year.

Petromex began well drilling in federal oil reserves of the Poza Rica and Papantla zones, Vera Cruz, under two forms of contract: one for the account of Petromex, the other on a royalty basis. The account contract was with Sabalo Transportation Company and called for drilling a well in Lot 31 of Poza Rica. This well, Petromex 5, began production with 5000 barrels daily from 7430 feet, but the output is being held to 3300 barrels a day. The Sabalo firm was paid 745,000 pesos (some $209,000 U. S.) for drilling, but there was an additional expense of 255,000 pesos for four kilometers of discharge pipe, high and low pressure separators, storage tanks, a pump station, etc.

Ten wells are being drilled for the company on a royalty basis in Los Choapas zone, Vera Cruz. Payment for drilling these wells is $25,000 per well down to 610 meters (2025 feet) and $10 per foot below that level, plus a 10 percent royalty on proceeds of the wells.

The company has contracted with Sabalo Transportation Company to explore 10,000 hectareas (a hectarea equals 2.47 acres) in Canton de Papantla, Vera Cruz, and to drill 10 wells in federal reserves that cross the Poza Rica zone. These wells must be completed in three years. The contract was awarded after Petromex had rejected several propositions by American and Mexican interests, largely because they insisted that the agreement allow them to drill in Lot 31 of the Poza Rica area, a great producing field. The Sabalo pact calls for a straight royalty of 30 percent of production for Petromex. Sabalo Transportation Company agrees to build a pipe line when an oil production of 12,000 or more barrels daily is obtained and a gas treatment plant when gas production amounts to 600,000 cubic feet in 24 hours.

Contracts for well drilling have also been made with A. R. Tillotson at Los Chotes, Panuco zone, Vera Cruz; Finlayson and Bob Hall in Los Esteros federal reserve; J. P. Appedole in the Tamesi river federal reserve, and Compania de Inversiones in Los Esteros and Los Chotes fields. This work is being performed on a royalty basis of 25 to 30 percent of production for Petromex as the wells sunk in these regions are not expected to yield more than 50 to 100 barrels daily, for the zones have been much exploited.

Contracts are being made with Gen. Manuel J. Celis to explore 18,000 hectareas in Reynosa municipality, Tamaulipas state, near the northeastern American border; J. Hernandez Ojeda to explore 10,000 hectareas in Ciudad Juarez municipality, Chihuahua state, across from El Paso, Texas; George W. Downer and Engineer A. Leal Trevino to work lands in Lower California Territory; Dr. Leon F. Gaul to exploit a strip in the federal reserves along the Tuxpan river and another in the Tuxpan zone, northern Vera Cruz, and Abel R. Perez to work 7570 hectareas in Camargo municipality, Tamaulipas, a region that is producing much natural gas. The Tamaulipas, Ciudad Juarez and Lower California contracts signalize Petromex's invasion of American border oil zones.

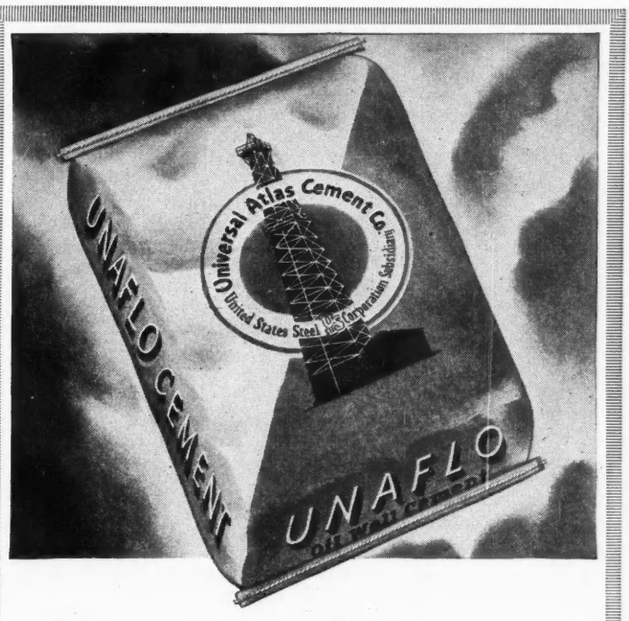
Planned Expenditures

During the period of the report, Petromex spent 3,600,000 pesos ($1,000,000) for refining and transportation, which included pipe lines to Tuxpan and work on the Tampico cracking and asphalt units; 2,350,000 pesos for exploration and exploitation, and 750,000 pesos for storage and distribution.

This year Petromex is spending 6,700,000 pesos as follows: Drilling and exploitation equipment: 1,900,000 pesos; pipe line between Tuxpan and Tampico: 1,750,000 pesos; Tampico cracking unit: 1,440,000 pesos; geological and geophysical explorations: 350,000 pesos; two storage stations in Mexico City: 250,000 pesos,

Type of houses built for native employees of Standard Oil Company of Venezuela at Quiriquire

"WE'VE ALWAYS NEEDED A CEMENT LIKE THIS" *oil men say*



1 Gives you more time to get it down. Unaflo remains easily pumpable under extreme well conditions, such as high temperatures and enforced delays.

2 Remains fluid. Can be pumped back of casing as a dense cement slurry. It is not necessary to jet Unaflo back of casing as a washed cement.

3 Follows irregularities of well bore and casing. Unaflo slurry is a fluid—not a paste.

4 Hardens thoroughly with high density after it is placed. Unaflo slurry remains fluid until attaining initial set.

5 Displaces contaminating elements in the well. It is possible to pump Unaflo with low water-cement ratios; the mix does not mingle with contaminating elements in the well but displaces them.

6 Not stiffened by mud contamination.

7 Not stiffened by salt water contamination.

8 Sets in sulphate water.

9 Requires no ice.

10 Makes squeeze and plug-back jobs easier, surer and more successful. Makes it safe to reverse circulation and wash out excess cement.

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"Just what we've always needed."

"I've never used a cement that worked so well."

These are the kinds of comment oil men are passing along about UNAFLO—the new type oil well cement with an adequate safety factor.

You'll like UNAFLO, too. It's a *better* oil well cement. It flows easier. Sets slower. Forms a casing seal of extremely high density and impermeable character. *And it performs like this under the pressure and high temperature of deep-well jobs!* UNAFLO is specially developed for deep-well cementing—for wells where high temperatures exist—for squeeze and plug-back work.

You will be interested in our test demonstration of UNAFLO. Ask to see it. And remember—when you use UNAFLO you get the satisfaction of knowing you are using a cement which has a safety factor adequate to protect your well investment!

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United States Steel U.S. STEEL *Corporation Subsidiary*

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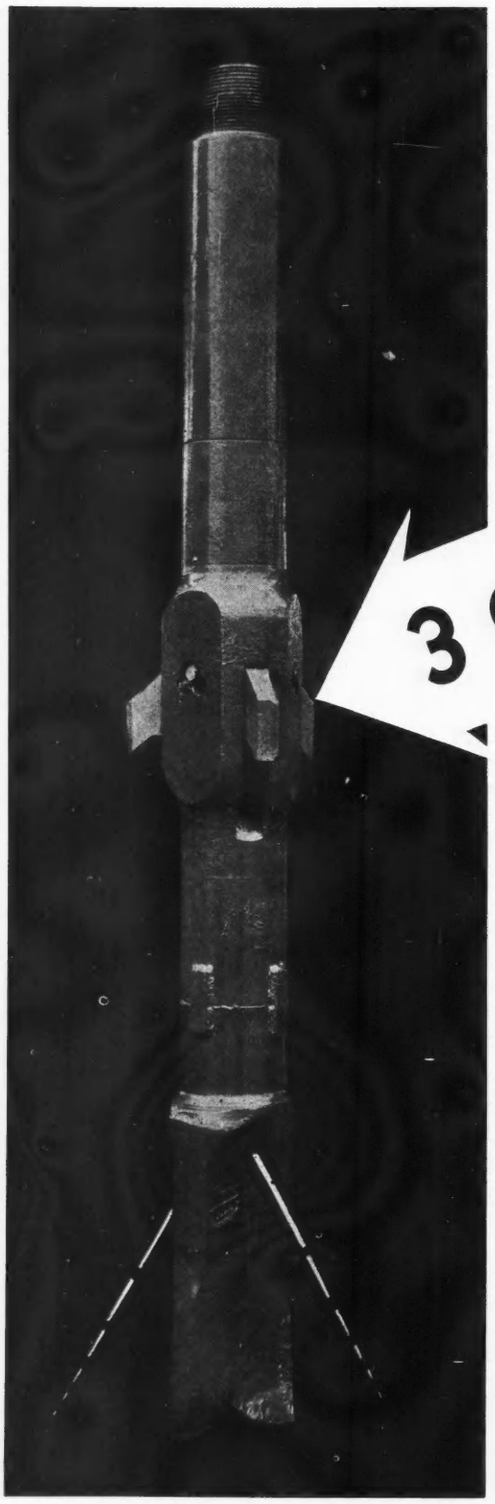
This picture shows you

WHY MacCLATCHIE
WALL SCRAPERS ARE BETTER



Three cutters are essential. They give a true circular bore eliminating vibration whip in the drill stem, resulting in a faster and cleaner cutting tool. Three cone bits and multi-blade bits are preferred by most operators. Three blade Wall Scrapers offer the same advantages.

3 CUTTERS

THE ONLY SCRAPER THAT GIVES A MESSAGE TO THE DERRICK FLOOR THAT THE BLADES ARE EXPANDED

The MacClatchie is the only Wall Scraper with circulation practically closed until blades are open to the point where the additional weight from the string is certain to fully expand the blades.

Even with the superior design and performance of three cutters, the MacClatchie Wall Scraper has not sacrificed body strength. In fact, the body of the MacClatchie Wall Scraper is much stronger than any other.

Another decided advantage of the MacClatchie Wall Scraper is that it has circulation at each cutter and circulation at the pilot bit.

The MacClatchie Wall Scraper is a modern tool for the modern job of: Scraping mud from production sands, enlarging production areas, and enlarging for better cement jobs.

MacCLATCHIE
MANUFACTURING CO.
COMPTON - - - CALIF.
HOUSTON - - - TEXAS
EXPORT - - - GEORGE R. WOODS
17 BATTERY PLACE, NEW YORK CITY

There is an outstanding reason why each MacClatchie Tool gives better service. This is one of a series of ads pointing out the chief reason why.

and filling stations here: 50,000 pesos; tugs and other vessels: 250,000 pesos, and acquisition of concessions: 100,000 pesos.

Petromex's net production from February 1, 1935, to the end of last year was 381,462 barrels. From January 1 to June 30, last, the output was 313,000 barrels, of which the Panuco and Tuxpan zones provided 253,000 barrels. Since February 1, 1935, Petromex marketed 408,240.27 barrels of crude for $309,331.64.

The company is arranging to establish a cracking plant in Mexico City. When its asphalt plant is completed at the Tampico refinery, Petromex will be able to treat Panuco fields crude and increase asphalt sales. Kerosene and gas oil obtained from the asphalt and primary distillation plants will service the cracking unit at Tampico. The company hopes to produce gasoline of higher than 70 octane and also to solve the problem of disposal of its kerosene and gas oil, which, it admits, have a very limited market.

NO MARKET THREAT

Turner Valley rocks too broken for big reserve

Paul von Weymarn, Calgary geologist, recently stated in an address delivered before the Oil and Gas Shareholders Association at Calgary, Alberta, that the Mesozoic rocks of Turner Valley were so badly broken that no large production could be expected, even though oil and gas in commercial paying quantities were established facts.

Tardiness in developing Canada's oil reserves, von Weymarn opined, was due to reticence of large corporations to enter into the play.

TO USE MORE OIL

Mexico will construct four new railroads

More home markets for oil fuel and lubricants are in prospect for the Mexican oil industry, as well as expanded facilities for moving products to domestic and foreign markets, with the building of 4 railroads by the government. These lines are to cost 117,706,000 pesos (about $31,000,000, U. S.), and will be completed from 1938 to 1940. One of them will open up a new petroleum zone in southwestern Mexico which has remained unexploited because of the lack of transportation facilities.

These railroads are:

The Southeastern, to connect Mexico City by rail with Campeche and Yucatan states. This line starts at Puerto Mexico, an important outlet for southern Mexican fields and terminal of the Tehuantepec National Railway, which crosses the Isthmus of Tehuantepec to Salina Cruz, an Oaxaca state west coast port, traverses Vera Cruz, Tabasco, Chiapas and Campeche states and links with the United Railways of Yucatan in Campeche City. This railroad will have a main line 800 kilometers long and 2 branches with a total kilometerage of 370 kilometers, all of which are to be standard gauge.

The railroad that will service the

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large oil deposit is that under construction between Ixcaquixtla, Puebla state, and Chacahua Bay, on the Oaxaca state Pacific coast, a route of 310 kilometers, with 3 branches, totaling 250 kilometers. Of the route 160 kilometers crosses the petroleum zone.

The third railroad is from Santa Catarina, Michoacan state, on the National Railways of Mexico, to Zihuatanejo, a Guerrero state Pacific port. It will be 325 kilometers long and will have a 26-kilometer branch.

Lower California Territory and Sonora state are to be connected by rail with the road that is being built from Fuentes Brotantes to Punta Penasco, on the Gulf of California, a run of 175 kilometers.

Oil burning locomotives are to be used on all these railroads.

MEANING VAGUE

Clause in Cardenas' note on strike is not clear

Considerable discussion has arisen as to the exact meaning the president of Mexico meant to convey in one sentence of a telegram to The Oil Weekly relative to his attitude on the strike called on November 29 (and subsequently called off).

Translation of the sentence from Spanish into English as it was published in the December 7 Oil Weekly was as follows: "The federal executive urged both factors that within a stipulated time to be decided on by both that they hold a conference in the interest of formulating a collective contract on the basis that remuneration to the workers be compatible with the economical conditions of the oil industry . . ."

Text of that part of the telegram dealing with the above was sent in the following words: "Ejecutivo federal excito ambos factores produccion riqueza efecto de que dentro un plazo senalado previamente celebren convencion encaminada formular contracto colectivo sobre base remuneraciones trabajadores sean compatibles condiciones economicas industria y habiendose aceptado esa sugestion cancelose huelga anunciada atentamente"

A note from Mexico City received December 10 states that a labor conflict at its Nanchital unit, Vera Cruz state, Mexico, was settled by the Mexican Eagle Oil Company (Royal Dutch Shell interests) with the granting of some of the various demands the employes made and the company's agreement to pay the help 80 per cent of the wages they lost during the dispute. Another communication received from Tampico December 10 reveals something of the humorous aspects of some of the demands made before and after the crisis of November 29. It reads in part:

"Some of the oil companies operating in Mexico have a clause in their contracts with Confederacion de Trabajadores, Mexicans, the labor syndicates (unions), which provides that when laborers have to work 30 feet, or higher, above the ground, when such an altitude is not along the lines of their normal and customary duties, they are to be paid double time. The psychology of some of the syndicalized workmen seems to be getting more permeated with these bases for demanding double time; for last week, with this as a background, a group of laborers demanded of their employer that they be paid double time for working on the ground at an elevation of 50 meters (155 feet) above sea level!

"It would not therefore be surprising if some of the office employes, who work in buildings above the ground floor, will be asking for double time for that sole reason," the letter ended."

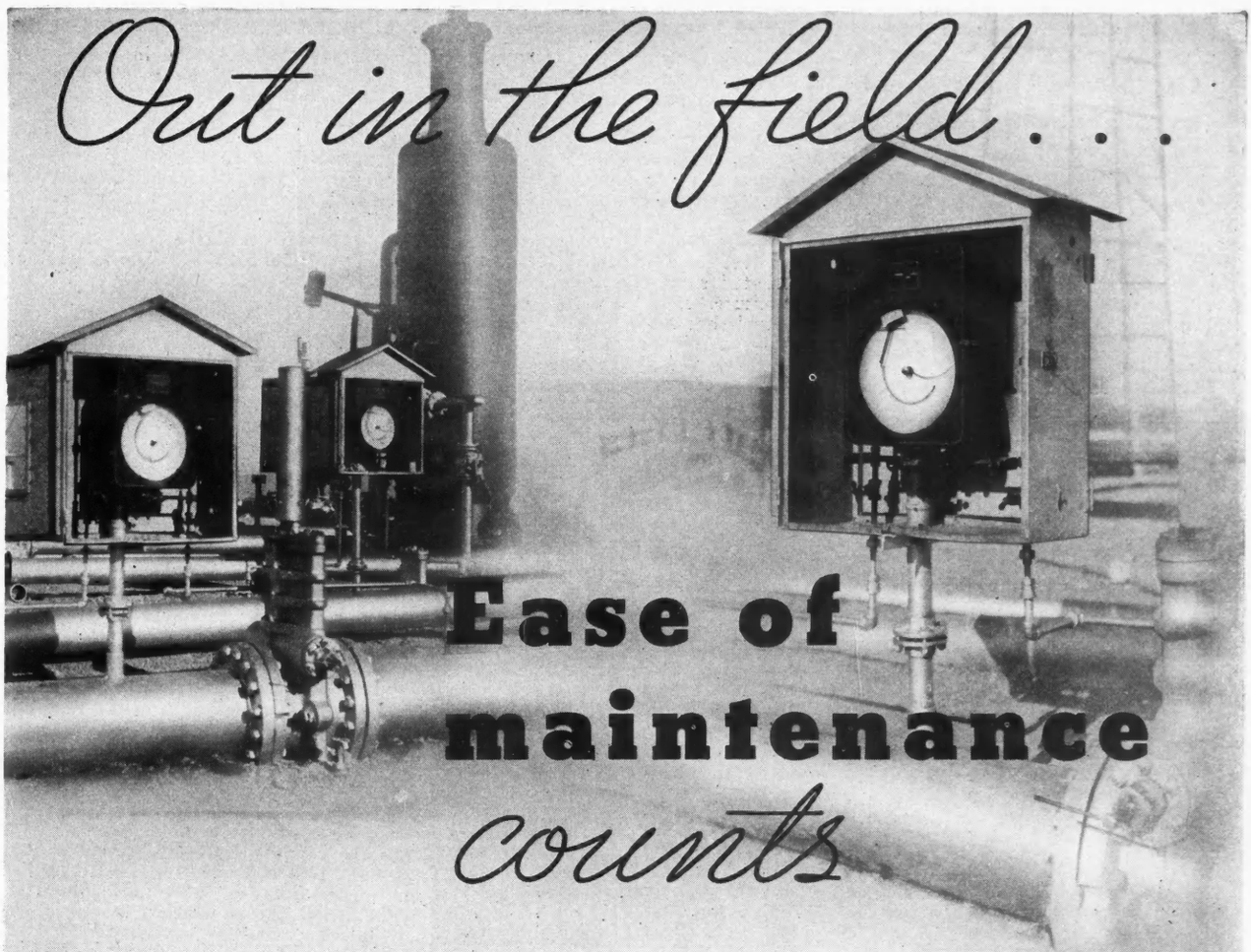
THERE'S PROTECTION IN THE CIRCLE
The 3-feed "STANDARD", shown in the circle below, is furnishing dependable lubrication to the oil industry's largest standard size slush pump, a 20-inch, running in a deep Texas field. This operator, like so many others, has found that the lubrication job can be left entirely to the care of "STANDARD" lubricators. Ask any user about "STANDARD" Lubricator dependability. We're proud of the answer you'll get.
AMERICAN LUBRICATOR CO.
FIRST NATIONAL BANK BLDG. DALLAS, TEXAS
EXPORT: Oil Well Supply Co.

MIER EXTENDED

North Mexico gas well tied to Monterrey line

Natural gas production has been extended in the Mier zone, Tamaulipas state, near the United States border, with completion of Munoz and Martinez's Lajitas 1 at 2030 feet for 1,450,000 cubic feet per day, according to an announcement last week by the Mexico ministry of national economy.

Lajitas 1 is four miles southwest of Ciudad Mier and near Munoz and Martinez's No. 2 and No. 3, completed as gas wells last summer. The well is producing through two-inch tubing and hooked on to United Gas Company's gas line to Monterrey. It has an estimated potential of 7,000,000 cubic feet per day.



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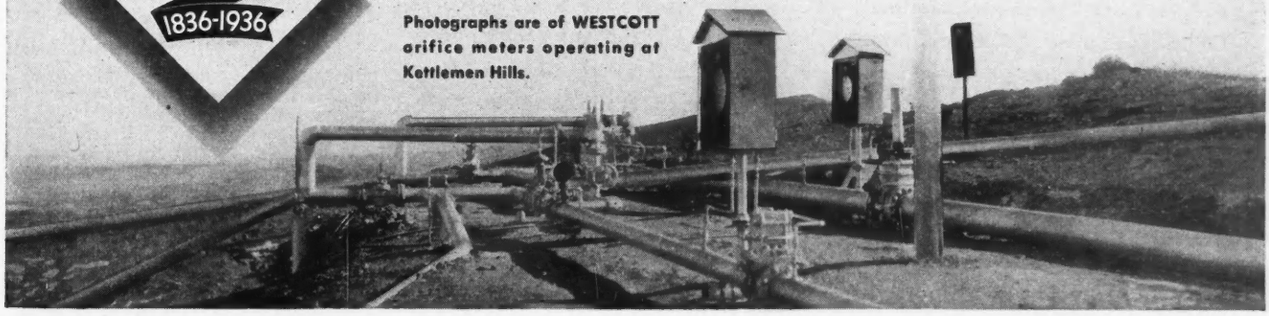


AMELIA SPACING

On 20-acre basis sought by oil companies

Austin. — Twenty-acre spacing for wells in the Amelia field was again advocated at a hearing last week before the Texas Railroad Commission. This program was urged by Humble Oil & Refining Company and other companies holding large leases in the area, but was radically opposed by representatives of land and royalty owners who urged the commission to provide for close spacing.

The first hearing on Amelia was held last February. A second was held in May, and the third on December 8.

Since the May hearing, new wells completed have located the gas-oil contact in the field. Ralph Schilthuis, Humble Oil & Refining Company petroleum engineer, said that the gas-oil contact was located at 6760 feet and that the oil-water contact was at 6786 feet.

Between these two contacts is a 26-foot section of which 11 feet is usually saturated sand. The remaining 15 feet constitutes shale breaks. Schilthuis estimated that there was in a place about 19,000 barrels per acre of which 8000 barrels would be recoverable oil. He said that the porosity was 28.5 percent and that saturation was 80 percent. Bottom-hole pressure in the field has declined from 3150 to 3080 pounds. There are now 11 producing wells and four dry holes have been drilled.

Much of the hearing was given over to testimony relating to the probable drainage area of the wells and arguments concerning the effect of 20 acre spacing.

Schilthuis and Ed Hamner, Humble Oil & Refining Company geologist, contended that one well to 20 acres was sufficient to obtain all the recoverable oil. They agreed that no more oil would be recovered if additional wells were drilled.

Commissnoners Thompson and Smith, before whom the hearing was held, indicated clearly that they thought closer spacing was advisable for the protection of land and royalty owners in the sense that it would insure a greater recovery from the field as a whole.

Thompson declared that the commission was not interested in drilling costs, but that it was interested only ni assuring the greatest ultimate recovery of oil from the field.

Austin.—An order prohibiting heat treatment of emulsions in the East Texas field with heat applications greater than 140°F. was issued by the Texas Railroad Commission December 4.

This order also forbids the heating treatment of any pipe line oil before it is gauged for proration purposes. The purpose of the order is to prevent treatment of oil in a manner that will allow the higher fractions to be taken off prior to the time the oil reaches the stock tanks. Another purpose is to prevent operators from producing oil, moving a part of it through gasoline plants and then producing enough additional oil to allow a full production of commission allowables. Some operators have been using heating towers to boost the volume of gas which they were sending to gasoline plants. Another purpose was said to be the removal of the lighter hydrocarbons to prevent their loss in time handling or weathering.

A commission investigation disclosed that the average heating was 140 degrees, although some operators found only 90 degrees necessary in treating emulsions.

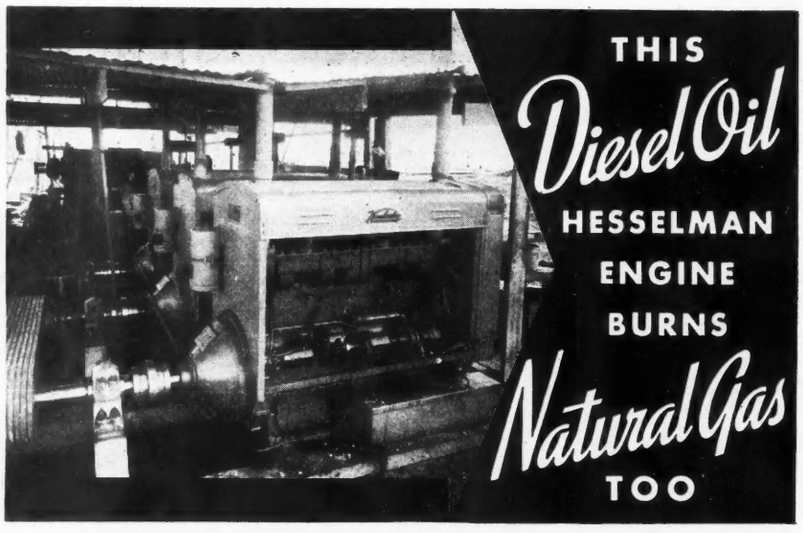
DISMANTLING TANKS

Prairie's old Copan farm going to junk yards

Tulsa.—Crews have started dismantling the Copan tank farm of Sinclair Prairie Crude Oil Purchasing Company. The 80 tanks, which have been filled and emptied many times in their 30 years of service, are going to the junk yard at the rate of one a day.

The Copan farm, between Bartlesville and the Kansas state line, was part of the immense storage system provided in the Mid-Continent by Prairie Oil & Gas Company. Another unit of the system was the Ramona farm, between Tulsa and Bartlesville. Tanks at the Ramona farm are still in use.

First tanks at Copan were erected in 1905 and additions were made to bring it up a point second in capacity to the Ramona farm, still listed as the biggest tank farm in the United States.



This triple engine hook-up rig is one of four rigs owned by the Blackstock Oil & Gas Co., Oklahoma City, that are equipped with ten Model EKH 190–195 hp. Waukesha-Hesselman Oil Engines.

The Hesselman is an engine that burns diesel fuels but here it is operating with gas because it is plentiful and cheap. The low compression of the Hesselman Engine makes it suitable for either fuel—an advantage not found in high compression Diesel engines.

The owners have drilled wells up to 7,000 feet. The three Hesselman Engines use about 75,000 cu. ft. of gas daily. Gas has proved equally satisfactory as to economy and performance . . . and as good or better time has been made than with steam rigs.

To convert this Waukesha-Hesselman from an engine burning diesel fuel to a gas engine, it is only necessary to install gas burning accessories in place of the fuel oil equipment—pistons, valves, cylinder heads, connecting rods, crankshaft, and bearings remain exactly the same.

Here's the reason—the Hesselman is a solid injection oil engine with electric spark ignition which permits compression ratios low enough and exactly suited to natural gas. Its ignition is definitely timed so that the combustion is under full control regardless of load, speed, or the character of the fuel itself. For wildcatting or in proven fields, this Hesselman is the ideal rig.

Write today for Bulletin 1045. ***Waukesha Motor Company, Waukesha, Wisconsin.***

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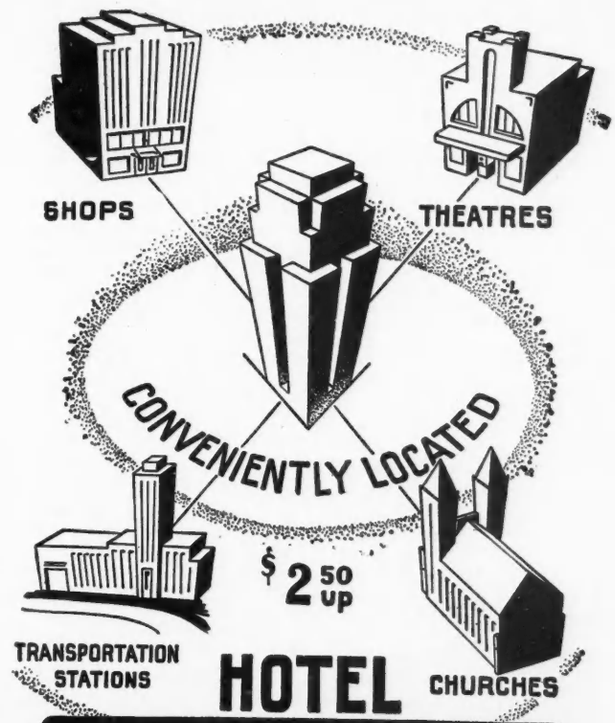

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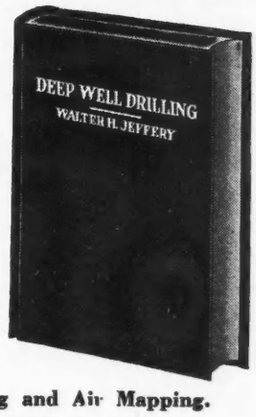

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Preparatory to writing this book, the author spent weeks in a first hand study of modern methods of drilling by the rotary system, and of completing wells, controlling high pressures and operating wells in the deep fields of California and Oklahoma.

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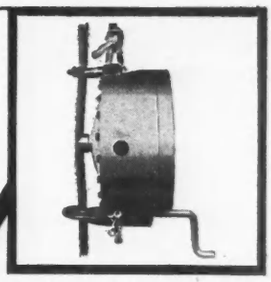

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ACCURATE WEIGHT READINGS

—Directly in Thousands of Pounds and in Points.

Pressure in "The Clipper" indicator is transmitted by a closed fluid column that eliminates errors that might arise from friction and metal fatigue. The full weight on the indicator is read directly in pounds or in points, regardless of the size of the load, from spudding in to pulling tubing.

TWO WEIGHT INDICATORS IN ONE

—Combining Both the Regular and Supersensitive Weight Indicators in One Instrument.

Meets the demands of present-day drilling for: wide range . . . extreme accuracy . . . strength . . . sensitivity and flexibility. Especially useful for shallow drilling, all production work, emergency fishing and all kinds of light weight drilling jobs. It sets a new standard for precise measurement.

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All parts are of the finest workmanship and carefully balanced, making the indicator instantly responsive to slightest changes in load. "The Clipper" is truly as sensitive as a ship's compass. Two sensitivity controls, adjustable at will, control the overthrow or wigwagging of indicator hands. This makes for precise reading on the derrick floor during all operations.

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Mechanical compensators automatically correct variations in readings formerly caused from temperature changes.

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An absence of exposed connections prevents tampering. Filling or pumping up the indicator with fluid in the field is eliminated as each instrument is vacuum loaded and sealed at the factory. A simple safety lock on the top hook prevents snapping or jerking the indicator off the dead-line.

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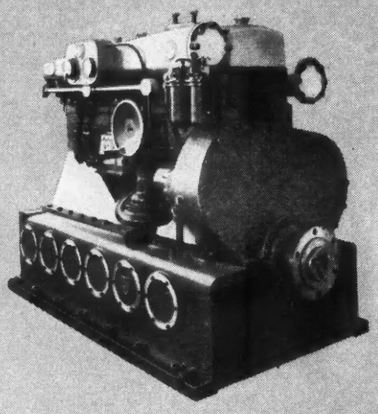

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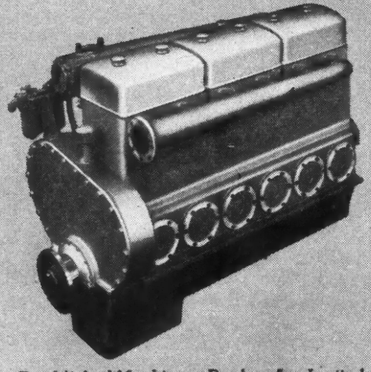

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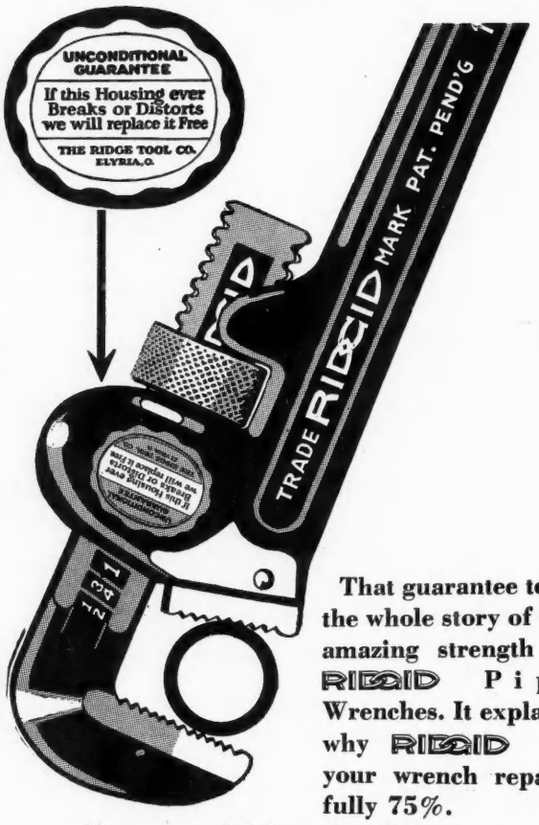
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STEEDMAN WILDCAT COMPLETION DELAYED BY ACCIDENT

WEEKLY STAFF REPORT

Tulsa.—Spot news seemed to be the order in the Tulsa area last week, operating reports coming from widely scattered areas and being of a general nature. While the Fitts field of Pontotoc County continued active, it was not as far out in front as usual. A new test in the area may link the Fitts and Jessie pools on the southeast if it proves productive.

The latest test, to be drilled south of the fault which has defined the southern boundary of many tests in the Fitts field, will be E. H. Moore et al's Muse 1, SW NE ST 33-2n-7e, and is more than a mile south of the nearest production in an area where operators have felt there was no accumulation and not worthy of a test. Nearest production in the Jesse pool to the new test is in Section 2-1n-7e, 1¾ miles to the southeast.

Second producer in the new eastern extension of the Fitts field was Blackstock Oil Company's Moody 4, SE SW SW 23-2n-7e, which flowed 495 barrels of oil the first hour through casing and 94 barrels of oil the second hour through tubing, following which it was shut in to take potential. Production was coming from the Wilcox sand at 4360 feet after acid treatment with 15,000 gallons.

E. H. Moore et al's Deaner 1, NW SW SE 23-2n-7e, drilled to 4430 feet in the Bromide lime where it was acidized with 2000 gallons. The well refused to flow when reacidized with an additional 6000 gallons. A pump was to be installed.

Fleetborn Oil Corporation's Wooley 5-A, NEc SE 28-2n-7e, topped the Hunton lime at 3210 feet, topped the Sylvan shale at 3514 feet and drilled to 3516 feet where it was acidized with 6000 gallons. The well received a potential of 134 barrels of oil in one hour through tubing and had 2,000,000 cubic feet of gas.

Magnolia Petroleum Company's Norris 7, NW SW SE 21-2n-7e, topped Sylvan shale at 3842 feet and after drilling to 3846 feet, was acidized with 5000 gallons, and flowed 167 barrels of oil the first hour through tubing and had 2,158,000 cubic feet of gas. The same company's Burris 9-B, SEc NE 28-2n-7e, was given a potential of 179 barrels of oil in one hour through tubing, accompanied by 2,925,000 cubic feet of gas. Production was from Sylvan shale at 3548 feet. The well was treated with 5000 gallons of acid.

Phillips Petroleum Company's Bates 2, NW NE NW 26-2n-7e, continued its flow from the Hunton lime. It made 870 barrels of oil in 4 hours and 20 minutes while pulling drill pipe, then flowed 275 barrels of oil in 1 hour through casing and was shut in.

Stahl Petroleum Company's Dennis 6-B, NE SW SW 21-2n-7e, made 210 barrels of oil in an hour, production coming from the Hunton lime at 3946 feet.

Trouble of Steedman

Drillers experienced some bad luck while trying to complete W. A. Delaney et al's Alexander 2, SWc NE SW 24-4n-7e, in the Steedman sector of Pontotoc County, rated as one of the most interesting wildcats in the area. Drill pipe stuck at 3770 feet in the Hunton lime and when cleaning out a backfire injured one of the members of the crew. While pulling on the stuck drill pipe several hours later, the derrick buckled and a new one must be installed before operations can be carried ahead.

Shell Petroleum Corporation's Moelling 1, CSW NW 31-21n-2w, northeast of the Lucien pool of Noble County, topped the Wilcox sand at 5373 feet and drilled to 5374 feet where an electrical well-logging device was run, showing no water. A core taken from between 5384 and 5389 feet had a full recovery of sand bearing stains of gas. Seven-inch casing is being run to 5307 feet.

Fleetborn Oil Corporation's Tanner 1, NWc SE 28-17n-5e, south of Cushing in Payne County, ran 2½-inch tubing at 3996 feet, following which the well sprayed 33 barrels of oil in 12 hours.

Mallarnee & Shelton's Flowers 1, SE SW SE 29-7n-6e, north of Konawa in Seminole County, flowed 240 barrels of oil in 24 hours from the Cromwell sand at 2974 feet.

Vierson Brothers' Jones 2, NW NE NW 11-6n-6e, topped the Turman sand at 2397 feet and cored sand from 2396 to 2405 feet. An 8-foot recovery showed saturated sand and 3 feet of shale. Pipe was being run to 2397 feet and standard tools were being rigged.

H. F. Wilcox Oil & Gas Company's Sac and Fox 4, NEc SW 15-14n-6e, south of Stroud in Lincoln County, appears good as a producer from the Prue sand. Top of the sand was found at 2912 feet, and after being drilled to 2931 feet, the well developed a large amount of gas having a strong odor of oil. Gas pressure blew the tools from the hole, wrecking the crown block and derrick. It was closed in and separator set. Two other Prue sand wells are located on the lease.

Ramsey Petroleum Corporation's Johnson 1, NW SW SE 9-3n-7e, southeast of Ada in Pontotoc County, had a sand from 145 to 180 feet which showed black asphaltic oil. Operators drilled to 512 feet and were to set 13-inch casing.

Shell Petroleum Corporation's Hill 4-A, CNW 30-3n-10e, in the Chiles Dome area of Coal County, cored from 5613 to 5623 feet and recovered 10 feet of brown dolomite. Top 3 feet of the core was slightly stained and the bottom 7 feet was hard with a slight odor and a very salty taste.

Carter Oil Company's Warne 1, NEc NW 31-3n-9e, in the Centrahoma area, cored to 5411 feet in the Viola lime and had a small show of oil from spotted saturation between 5395 and 5405 feet.

Oklahoma operators completed 49 wells during the past week, 34 being producers with a total initial of 43,746 barrels of crude. Three completions were for a total open flow of 88,750,000 cubic feet of gas. One location was abandoned and 11 starts resulted in failures.

Scouts reported 61 locations with Okfuskee County leading with 10 and Pontotoc County 9. Seven starts were reported from Seminole County, 6 from Creek County, and 3 each from Carter, Logan, Osage, Pottawatomie and Stephens counties. Two reports each were from Cleveland, Jackson, Lincoln, Oklahoma, and Okmulgee counties, and 1 each from Hughes, Marshall, Muskogee, and Noble counties.

TILLMAN TEST SHOWS

Source of water with oil matter to determine

Ardmore. — Southern Oklahoma activity last week was centered on the new Tillman County well of Indian Territory Illuminating Oil Company, which has been having trouble with water encroachment. Other developments in the area were widely separated.

Indian Territory Illuminating Oil Company and Foster Minerals Corporation's Hatler 1, CSW NE 32-2s-17w, south of Frederick in Tillman County, showed 1200 feet of fluid in the hole with oil on top and salt water on the bottom. Operators were unable to determine whether the water was coming in around the plug or whether the present supply of water had backed up in the sand while the well was closed in. It is to be swabbed in an effort to ascertain the source of the water.

Coline Oil Company's Johnson 1, SW SE NE 1-2n-8w, west of Marlow in Stephens County, topped the sand at 5102 feet and after drilling to 5108 feet, showed a slight stain of oil and gas. Cored from 5108 to 5124 feet, the well showed a stain of oil and gas, with the remainder of the core showing sandy lime and shale.

Field advices from Garvin County were that Pure Oil Company's Baker 1, SEc NE 7-2n-1e, may be abandoned at 4451 feet in the Siliceous lime.

Activity continues fairly strong in the new Tussy pool of Garvin and Carter Counties. Location was staked by Winkler & McQueen for Perkins 1, NWc SE 32-1n-3w, in the northern part of the feld. It is a north offset to Cox & Hamon's Davis 7.

Cox & Hamon's Wallace 1, SWc SE 32-1n-3w, was estimated good for about 125 barrels of oil daily, from a broken sand between 2100 and 2300 feet.

Skelly Oil Company's Miller 1, NE NW NE 5-1s-3w, on the Carter County side of the field, was pumping about 86 barrels of oil daily from between 2615 and 2644 feet. It had been drilled to 2860 feet.

Magnolia Petroleum Company's

Gardner 1, CNE NW 34-6s-2e, in the Marietta area of Love County, was troubled with cavings and was running 8-inch pipe to 2150 feet. The well had swabbed 42½ barrels of oil earlier in the week.

Gulf Oil Corporation's Johnson 8, CSW SW 28-2s-3w, in the Fox pool of Carter County, bailed down 2800 feet with no show of either oil or gas. The well was treated with 2000 gallons nearly two weeks ago but refused to react.

Sinclair Prairie Oil Company's Stockton 1, NEc NW 26-6s-2w, in the Oswalt area of Love County, swabbed more than 70 barrels of oil late in the week.

Power Oil Company et al's Lancaster Trust Company 1, CSW NE 10-1s-2e, near Marlow in Stephens County, was rigging up rotary tools at 3203 feet.

CITY AREA QUIET

Oklahoma City.—With little activity in the Oklahoma City field proper, interest swings toward the more active fields in Cleveland and northern Oklahoma counties. In the Moore pool of Cleveland County, Anderson-Prichard Oil Company's State 1, SWc SE 16-10n-2w, in the north end of the pool, made 420 barrels of oil through 2½-inch tubing and had 6,000,000 cubic feet of gas. Later in the week, the well made 504 barrels of oil in 21 hours, and at last reports was bottomed at 7256 feet.

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OKLAHOMA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
COMANCHE COUNTY—		
A. E. Heiden, Mitchell 1, ne ne nw 10-3n-10w (otd 1093)	*	1455
CREEK COUNTY—		
Klingensmith, Gilcrease 3-A, csl se se 33-17n-12e	300	2284
L. B. Jackson, Whitehood 2, se se ne 35-18n-8e (otd 2465)	*	2760
HUGHES COUNTY—		
Olympic Oil, Dunn 1-A, se nw se 11-7n-8e	20	1845
Vulcan, Hall 1, ne ne sw 4-8n-10e	¶3	3187
Ripps & Amerada, Turner 8, ne ne nw 4-9n-9e	*	3520
JACKSON COUNTY—		
Gulf Oil, Shirley 5, sw nw ne 6-1s-19w	25	2613
JEFFERSON COUNTY—		
Mid-Continent Pet, Reid 1, csw nw 32-6s-4w	*	1807
LINCOLN COUNTY—		
Skelly, Sporn 1, nw ne sw 21-17n-3e (pb 4588)	¶83¼	4651
OKFUSKEE COUNTY—		
Chapman et al, Brunner 1, se nw se 25-10n-8e	720	1773
Manahan Oil, Black 1, se ne se 25-10n-8e	384	1751
Black 2, sw ne se 25-10n-8e	721	1780
Blackwell, Dolton 11, se nw ne 36-10n-8e	170	1739
Sinclair Prairie, Carolina 6, sw ne sw 31-10n-9e	143	1774
Eagle Picher, Autry 2, ne nw ne 26-10n-11e (otd 2643)	8	3103
Commercial et al, Comey 1, nw ne ne 26-12n-11e	150	3580
OKLAHOMA COUNTY—		
Black Gold, Hays 1, csl se se 27-12n-3w	1443	6449
Knox Garvin, Dray 1, ne se se 27-12n-3w	¶ 10 & 2574	6455
Sunray et al, Harn 3, ne se nw 27-12n-3w	¶ 18¾ & 10,113	6455
OKMULGEE COUNTY—		
Collins, Webb 1-A, ne se sw 27-16n-11e (otd 2455)	*	2898
OSAGE COUNTY—		
Gillespie & Son 5, nw se ne 5-20n-12e	7	1390
Elm Oil, 6, cwl e½ nw 17-20n-12e	*	1482
E. O. Platter 12, nw sw ne 30-22n-9e	*	1015
Link Oil, 8, sw ne nw 4-22n-12e	125	1653
Opal Twyman, John Tyler 2, sw se nw 4-23n-11e	¶ 2½	1565
Phillips, Lookout 2, ne se nw 9-24n-7e	80	2701
Lewis & Texas, Kenny 9, se ne sw 9-24n-7e	12	2690
Lewis, Callihan 9, ne nw sw 23-26n-6e	50	2985
Carter Oil, 8, nw nw se 34-26n-6e	250	2908
PONTOTOC COUNTY—		
Mid-Continent Pet, Statler 1, se se sw 2-1n-7e	¶ 4 & 647	4655
Amerada Pet, Wooley 3, ne se se 21-2n-7e	¶1¾ & 4350	3952
Crosbie, Burris 1-B, ne sw se 22-2n-7e	¶ -¾ & 4350	3952
Moore, Moody 5, se ne se 22-2n-7e	¶ 1 & 399	4375
Simpson, Westheimer 4-A, ne se ne 27-2n-7e	¶ 3½ & 6288	3648
Moore, Craddock 1-A, nw nw sw 29-2n-7e	¶ 2½ & 3096	3595
Schauers 15, nw ne nw 29-2n-7e (pb 4270)	¶3½M & 1953	4350
Magnolia, Hardin 7, sw nw ne 30-2n-7e	3216	3816
Moore, G. Smith 4-A, ne ne nw 31-2n-7e	¶1 2872	4455
Benedum & Trees, Burke 2, nw sw sw 28-5n-5e (otd 2343) (pb 2660)	5	2675
H. & M. Drlg, Busby 5, ne sw se 20-5n-8e	*	929
POTTAWATOMIE COUNTY—		
Phillips, Booze 4, nw ne se 9-7n-4e (pb 3502)	25	4202
Superior Oil, Caudle 2, sw nw ne 24-7n-4e	*	4427
SEMINOLE COUNTY—		
Delaney, Reed 1-A, se sw sw 12-5n-7e	420	4022
Fleetborn, Patten 2, sw nw sw 18-6n-8e (pb 2841)	*	2921
Geo. Burris, Jefferys 1-A, nw sw sw 32-8n-7e	*	3350
Rodgers O & G, Stubbs 1, nw nw sw 16-9n-7e	235	3460
Carter Oil, Key 1, nw nw se 26-11n-6e	209	4120
STEPHENS COUNTY—		
Gulf Oil, D. Billy 2, se nw nw 15-3s-5w	23	1487

*Failures; †Junked; ¶Million cu. ft. gas.

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Pick Test Site

OLD WELL WILL BE USED TO ATTEMPT LEXINGTON EXTENSION

WEEKLY STAFF REPORT

Wichita.—For the second test of the Lexington area, Clark County, Olson Drilling Company has elected to rework a well abandoned in 1931. Drilled by Watchorn Oil & Gas Company, Morrison 1, 20-32s-21w, was non-commercial after a showing in the Viola lime.

A month ago the company completed another Morrison 1, that located in CSE SW 17-32s-21w, for a potential of 2358 barrels after a flow of six hours through three-inch tubing. This well hit Viola lime at 6456 feet and drilled to 6481 feet.

The first effort to rework the Watchorn well was to cement the hole back to the Viola lime depth. When the plug was drilled water broke in from behind the casing. A whipstock will be set higher and an effort will be made to reach the Viola lime by that means. The producing well is shut in for lack of outlet.

Completion of Vernon Oil & Gas Company and Armer's Ainsworth 1, NEc SE 33-16s-13w, Barton County, gave Kansas another Siliceous lime pool. Top of the lime was found at 3381 feet. After finding the pay at 3393 feet, the well filled 1100 feet with oil in 1 hour, had 2100 feet of oil in the hole in 3½ hours, and 2900 feet of oil in the hole in 7 hours. Total depth was 3395 feet.

Natural flow of the well was estimated at 800 barrels of oil daily, even though operators missed the conglomerate, the well running high. Oil men consider it the most important strike made in central Barton County to date.

Extending production one location west in the old Viola lime area of Marion County, National Refining Company completed Reamy 18, CNL NE 17-21s-4e, in the Covert-Sellers pool. After being acidized, the well pumped 285 barrels of oil and no water from the Viola lime at 2068 feet. Top of the lime was encountered at 1775 feet, and the pay formation was had from 2061 feet to the total depth. The well made 60 barrels of oil on a natural production test before being acidized.

Another key test has been staked in Reno County. It is Lew Wentz' Wright 1, SE NE NE 9-23s-8w, 14 miles west of Hutchinson. It is located at the top of an apex formed by the Hauschild pool of Rice County to the northeast and the Abbyville pool of Reno County to the southeast.

A small producer which extends production to the east in the Hauschild pool is Tom Deal et al's O'Connell 1, NWc NE 14-21s-7w. It was given a potential of 390 barrels of oil, coming from the conglomerate at 3380 feet.

Ohio Oil Company's Lawson 1, SE NE NW 15-26s-9w, in the Lerado pool, was completed for 2473 barrels of oil from the Viola lime at 2148 feet. Lawson 1 is an offset to Empire Oil & Refining Company's Mauck 1, recently completed extension well which was given a potential of 7153 barrels of oil.

An attempt to extend production one location east in the same pool is being started as Shell Petroleum Corporation's Reece 1, CWL SE 11-26s-9w. The new test is an offset to the company's Reece 3, which was completed for 8820 barrels of oil. Shell Petroleum Corporation's Mauck 1, ½-mile south of Reece 1, was completed as a dry hole and later converted into a water disposal well.

Reports from York State Oil Company's Gugler 1, SWc 36-12s-21w, northwest of Ellis but in Trego County, state the well pumped 50 barrels of oil from the Siliceous lime at 3834 feet, and will be acidized. If completed as a commercial producer it will open the third pool for Trego County.

Production in the Schartz pool of Rice County was extended southeast last week when Sinclair Prairie Oil Company's Proffitt 1, NWc 30-20s-10w, was completed for 1462 barrels of oil from the Siliceous lime.

Shell Petroleum Corporation's Hoferman 3, NEc SE 6-19s-9w, in the Hoferman pool, was completed for 2198 barrels of oil from the Siliceous lime at 3288 feet. The flow was had following acidization.

The south extension well in the Silica pool of Rice County, Gulf Oil Corporation's Schmidt 1, NE SE SE 6-20s-10w, was completed for 557 barrels of oil from the Siliceous lime at 3342 feet.

What is believed to be the biggest well ever drilled in the Silica pool of Rice County, Kansas' largest pool, is Stanolind Oil & Gas Company's Specht 8, NW NE SE 6-20s-10w, which pumped 2644 barrels of oil in 24 hours, natural. Production was coming from 3313 feet in the Siliceous lime, topped at around 3300 feet.

Atlantic Oil Producing Company and Empire Oil & Refining Company's Jordan 1, SWc NW 15-25s-14w, southwest of St. John in Stafford County, pumped 270 barrels of oil and 70 barrels of water from the Lansing lime at 3727 feet on a 24-hour test. Although making 80 percent water at the beginning of the test, the volume dropped to 5 percent at the completion of the test.

Skelly Oil Company's Kipp 1, SEc NE 27-25s-14w, northwest of Pratt, was being plugged back to the Lansing lime after finding water in the Siliceous lime at 4250 feet. Kipp 1 pumped 158 barrels of oil natural from the Lansing lime before deepening to the lower horizon.

Western Kansas Oil & Refining Company et al's Dreese 1, CE½ NE NE 2-23s-2w, farthest north well in the Halstead pool of Harvey County, was given potential of 4852 barrels of oil natural from the chat at 2993 feet. Hertzler 1, CNW NW 13-23s-2w, at the extreme south end of the pool, was being completed.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Vickers & Johnson, Eahly 1, sw sw sw 15-16s-12w	311	3345
Yarnell & Carlson, Bloomer 3, sw ne nw 26-17s-11w	1139	3329
Davis et al, Wm. Steckel 5, se se se 1-20s-11w	1538	3288
BUTLER COUNTY—		
Slick, Pryor & Lockhart, Guenther 4, sw sw ne 29-26s-7e	130	2753
CHAUTAUQUA COUNTY—		
Union Gas, Wilson 8-A, se nw ne 14-33s-12e	50	1819
ELLSWORTH COUNTY—		
Continental Oil, Jansen "B" 6, sw sw sw 34-17s-8w	353	3270
GREENWOOD COUNTY—		
Estes et al, Edgar 1, nw nw se 1-28s-8e	*	1848
McPHERSON COUNTY—		
Empire, Keefer "A" 1, sw sw sw 25-18s-1w	*	3406
NESS COUNTY—		
Sayre Oil et al, Ryersee 1, cne se 34-18s-21w	*	4696
RENO COUNTY—		
Shell, Whipple 2, nw sw ne 15-26s-9w	4178	4153
RICE COUNTY—		
Continental et al, Lansing 5, ne ne se 25-18s-8w	1479	3185
Shell, Haferman 3, ne ne se 6-19s 9w	2189	3238
W. E. Witt et al, Wright 1, nw nw se 26-19s-9w	*	3275
Empire, Coldwater "B" 2, se ne nw 17-20s-9w	*	3355
Mid-Continent Pet., Risse 8, ne ne ne 6-20s-10w	1845	3305
Tatlock, Berscheidt 11, se sw nw 6-20s-10w	1510	3274
Douglass et al, Patton 1, sw sw sw 5-21s-7w	1137	3342
RUSSELL COUNTY—		
Central Pet., Rush "A" 2, cn½ se sw 19-12s-15w	520	3083
Equity Gas, Gross 2, sw nw ne 31-13s-12w	670	3033
Camac Oil, McConnell 1, sw sw se 22-13s-14w	*	3338
Witt, Witt 6, sw ne se 3-14s-15w	1244	3295
J. C. Shaffer, Polcyn 7, sw se ne 10-14s-15w	903	3271
Coralena Oil, Trapp 13, nw nw se 30-15s-13w	2808	3253
Trapp 14, sw nw se 30-15s-13w	2705	3263
W. I. Southern, Inc., Shaffer 8, sw nw ne 31-15s-13w	2555	3252
SMITH COUNTY—		
Helmerich & Payne et al, Meyer 1, ne ne sw 10-5s-11w	*	4161
SUMNER COUNTY—		
Texas, Carr 1, ne ne ne 5-32s-1w	825	3670
Slick, Pryor & Lockhart, Murphy 4, sw se se 32-31s-1w	1089	3695
Stelbar, Earker 9, ne ne sw 33-31s-1w	1495	3676
McBride & Olson, Kinlung 1, ne nw ne 24-34s-1e	*	3908
WOODSON COUNTY—		
Elbar, Opperman 4, cwl e½ ne 27-23s-14e	*	1707
Dunn & Lewis, Dawson 2, cne ne 27-26s-13e	*	1200

*Failures; †Junked; ¶Million cu. ft. gas.

BOOST OUTPUT

Lea County maintains development schedule

WEEKLY STAFF REPORT

Hobbs, N. M.—Lea County maintained its high rate of activity the past week in contributing 13 oil producers and a gasser, and during the same period added 10 new operations. Monument field scored 5 new tests, and 3 were assigned to the Eunice lime area, while the Cooper field and a wildcat prospect accounted for one each.

December proration schedule approved by the conservation commission boosted the allowable for the state 2700 barrels to a new peak of 86,200 barrels daily. It exceeds the Bureau of Mines estimate by 7900 barrels. Lea County areas served by major pipe lines received the entire increase plus 200 barrels diverted from the Artesia district and 100 barrels from the Hogback field, because of decreased demand by refineries that serve the latter areas. The boost enabled Lea County wells to increase from 97 barrels to 100 barrels daily each, and a 969-barrel gain for Hobbs. Monument remains restricted to 12,000 barrels daily, or an average of 49.6 barrels per well for the 242 producers, owing to the two pipe line outlets restricting their runs to the above figure since September 16.

Occupying the highest structural position in the Monument field, Amerada Petroleum Corporation's E. S. Adkins 1, C SW SW 5-20s-37e, has encountered difficulty with crevices and loss of rotary returns in drilling to 3830 feet, or 265 feet sub sea, where it is bottomed in oil saturated lime. A string of 5½-inch pipe was due to be landed on top of the oil pay and cement late last week after an unsuccessful attempt was made to run 7-inch casing. Cement was used on several occasions to fill crevices and shut off prolific gas. The larger pipe failed to clear the cement adhering to the walls of the hole, and when rotary fluid was thinned to afford more freedom in handling the pipe the well threatened to blowout. Amerada Petroleum Corporation contributed two of the new locations for the Monument area in starting operations on W. P. Byrd 1, C NW NE 12-20s-36e, and D. F. Larsen 1, C SE NW 32-19s-37e.

Phillips Petroleum Company's Hobbs-Britt 1, C NE SW 18-20s-37e, situated more than a mile from production but on a line between the Monument and Eunice fields, flowed 74 barrels natural when tested through tubing at 3861 feet, and was preparing to acidize. Stanolind Oil & Gas Company is starting O. J. Gilluly 3, C NE NE 24-20s-36e. Location was also made for Gilluly 2, C NW NE 21-20s-37e. Gulf Oil Corporation is starting State-Kutter 2-A, C NW SE 20-19s-37e. Continental Oil Company's State 1-A-26, C SW SW 26-19s-36e, an outpost on the northwest flank of the structure, gauged 64 barrels of 33 gravity oil on 20-hour natural flow through ⅛-inch choke from lime at 3880-3985 feet, with an elevation of 3674 feet. It will require three offsets.

Repollo Oil Company developed a natural flowing producer in State 1-193, SE NW SW 30-20s-37e, on the north end of the Eunice area, with a potential yield of 480 barrels through ¾-inch choke from lime at 3837 feet, or 379 feet sub sea. The gas volume was rated at 1,500,000 feet daily. In the east portion of the Eunice area, Continental Oil Company's State 5-D-15, C SW NE 15-21s-36e, flowed 64 barrels of 35 gravity oil per hour natural through ¾-inch choke from lime at 3730-3880 feet, and State 6-D-15, C NE SE 15-21s-36e, flowed 60 barrels of 35 gravity oil per hour under same restrictions from lime at 3766-3865 feet. The company's Lockhart 5-B-14, an east offset to the latter, flowed 175 barrels natural in 16 hours through 15/64-inch choke from lime at 3780-3877 feet. New locations include Sun Oil Company's J. A. Akens 5, C SE SE 3-21s-36e, and Humble Oil & Refining Company's J. D. Knox 8, a south offset. Gulf Oil Corporation has started Jas. H. Day 1, NE NE SW 6-22s-36e, on the southwest edge of production.

George F. Getty Oil Company began operations December 1 on Etz permit 1, C NE NE 12-21s-32e, situated on wildcat acreage farmed out in western Lea County by Continental Oil Company and The California Company. A number of dry holes have been drilled in this general area.

The Texas Company's J. D. Young 1, SE SE SE 5-24s-37e, semi-wildcat in the sandy-lime belt, was completed flowing 84 barrels initial after plugging back from 3647 feet to 3589 feet for nitro shot. The Texas Company et al's Chas. W. Shepherd 2-A, C SW NW 6-26s-37e, South Jal area, encountered more sulphur water in deepening to 3150 feet, and has plugged back to 3077 feet to make a new effort to complete as an oil producer in the dolomite. Argo Royalty Company's B. T. Lanehart 1, SW SE NE 21-25s-37e, east of Jal, developed hole full of sulphur water in drilling to 3754 feet, and will plug back to complete as a gasser in the upper lime zone.

NEW MEXICO

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eunice Field)—		
Continental Oil Co., State 5-D-15, c sw ne 15-21s-36e	3000	3880
State 6-D-15, c ne se 15-21s-36e	2500	3865
Conoco & California Co., Lockhart 5-B-14, c nw sw 14-21s-36e	350	3877
Gulf Oil Corp., State-Orcutt 2-C, c lot 1, 6-21s-36e	420	3855
Humble, State Aggies 6, c sw ne 31-20s-37e	500	3840
Jim Murray et al, State-Wallace 3, c lot 14, 3-21s-36e	190	3875
LEA COUNTY (North Eunice Field)—		
Geo. F. Getty Oil Co., D. C. Hardy 1, c se se 20-21s-37e	1000	3800
LEA COUNTY (East Jal Field)—		
Empire O&R Co., Sim Dabbs 1, c nw nw 23-25s-37e	¶37	3361
Plains Prod. Co., et al, Knight-Humble 2, c nw sw 22-24s-37e	500	3485
Skelly Oil Co., F. S. Stuart 1-A, near c ne nw 15-25s-37e	260	3402
The Texas Co., J. D. Young 1, se se se 5-24s-37e	84	3647
LEA COUNTY (Monument Field)—		
Conoco, State 1-A-26, c sw sw 26-19s-36e	500	3985
Gulf Oil Corp., T. Anderson 1, c sw se 8-20s-37e	3600	3872
Repollo Oil Co., State 1-193, se nw sw 30-20s-37e	2000	3837

*Failures; †Junked; ¶Million cu. ft. gas.

GOLDSMITH STRIKE

Two tests help fill gap between producing areas

WEEKLY STAFF REPORT

Midland, Texas.—Unexplored acreage on a line between the main portion of Goldsmith field, Ector County, and the northwest extension area was proven for oil production last week when two of four tests underway on adjoining sections were showing for producers. Shasta Oil Company and Cordova Union Oil Corporation's C. Scharbauer 1, SWc NW¼ Section 29, Block 44, T-1-N, cored oil saturated lime at 4132-4147 feet, and developed 900 feet of oil in the hole when a formation tester was used with a packer set at 4116 feet. Humble Oil & Refining Company's W. F. Cowden 1, C NW SW Section 30, slightly more than one mile to the southwest, logged saturation at 4257-75 feet, and halted at 4278 feet, or 1083 feet sub-sea, to shoot with nitro. Texas Pacific Coal & Oil Company's C. Scharbauer 1, NEc Section 31, topped lime at 3780 feet, and was drilling below 4100 feet. American Maracaibo Company's C. Scharbauer 1, SWc Section 19, has not reached the lime zone.

Devonian Oil Company et al's C. Scharbauer 1, SWc SE¼ Section 34, Block 44, located one mile east of nearest production, topped the oil zone at 4177 feet, or 1033 feet sub-sea, and filled 300 feet with oil when deepened to 4181 feet. Top of lime was logged at 3900 feet.

Four Drilling Obligations

Texas Pacific Coal & Oil Company assumed an obligation to drill a test on each of four tracts, aggregating 327 acres, acquired from Wahlenmaier Petroleum Corporation in the old Duval townsite, Winkler County, and is to have 50-percent in-

TEXAS PANHANDLE

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
L. R. Hagy-Harrington-Marsh, E. F. Bryan 1	¶20.8	2682
GRAY COUNTY—		
Claude Drlg. Co., E. A. Gorenflo 2	1057	3293
King Oil Co., J. C. Vallmert 6-N	490	3270
Shell, Combs-Worley 2	345	3061
Skelly Oil Co., H. Schafer 80, sec 172	805	3270
The Texas Co., W. W. Harrah 10	667	3252
Texwell Oil Corp., L. C. McConnell 5	¶38 & 119	3326
Warner Oil Co., A. Chapman 3	854	2661
HUTCHINSON COUNTY—		
Benonine Oil Co., W. F. Starnes 3	1110	3165
Phillips Pet. Co., C. F. Bryan 2	437	3084
Harry Stekoll-Darby Pet. Co., Dial-Perkins 4	387	3105
MOORE COUNTY—		
Continental Oil Co., C. R. Jones 1-A	¶34.1	3210
C. R. Jones 1-B	¶40.8	3140
WHEELER COUNTY—		
Lela O&G Co., Laycock 9	20	2256
Ohio Fuel Supply Co., A. H. Finley 1	¶37.1	1971
C. T. Palmer et al, C. A. Linkey 4	¶16.8	1962
Skelly Oil Co., D. E. Johnson 24	422	2610

*Failures; †Junked; ¶Million cu. ft. gas.

terest. Leases are in Section 35, Block 26, and in the south portion of the Sayre field. Harry Adams and C. T. A. Bradley have started operations on W. P. Edwards-Shell 1, NEc SE¼ Section 6, Block C-23, PSL Survey, northern Winkler County, offsetting a recent semi-wildcat oil strike by Bert Fields, A. W. Cherry et al. Shell Petroleum Corporation farmed out the 160-acre tract, retaining an eighth over-riding royalty until lease production amounts to 575 barrels daily, then the interest increases to one-sixth over-riding royalty.

Practice of sub-leasing proved and semi-proved leases in West Texas is becoming more prevalent. In the North Cowden field, Ector County, Ohio Oil Company assigned its S. B. Wight 80-acre lease, embracing the S½ NW¼ Section 14, Block 43, T-1-S, to Alma Oil Company, Oklahoma City, for 3/32 over-riding royalty. Operations have been started in the southwest corner of the tract.

In the McCamey field, Continental Oil Company has added to its growing list of farmouts by assigning R. H. Henderson, Midland, et al, lease on the Baker tract, consisting of the NW 160-acres of S¼ Section 7, M. S. Denton Survey, Upton County, for 1/16 over-riding royalty.

WEST TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ECTOR COUNTY (Goldsmith Field)—		
Phillips Pet. Co.-Pure Oil Co., C. Cowden 7	1106	4165
ECTOR COUNTY (Judkins Field)—		
Skelly Oil Co. et al, J. Scharbauer 5	549	3630
FISHER COUNTY—		
Gen'l Crude Oil Co., Wm. Flannigan 10	395	3114
GLASSCOCK COUNTY—		
Conoco-Group 1 Oil Corp., Settles 19-S	313	1230
HOWARD COUNTY—		
The California Co., G. M. Dodge 6	500	2810
JONES COUNTY—		
R. B. Farris, L. Fikes, Ungren & Frazier, Guitar 2	390	2114
PECOS COUNTY (Masterson Field)—		
A. E. Lynch & Lyman, Byrne-Empire 1-B	*	1500
PECOS COUNTY (Torborg Field) —		
Phil Broun et al, Tippett-Humble 16	193	575
PECOS COUNTY (Yates Field)—		
Ohio Oil Co., I. G. Yates 53-A	7512	1547
UPTON COUNTY (McCamey Field)—		
Black, Case & Hanna, J. F. Lane 7	210	2333
Cardinal Oil Co., E. Wooley 1-C	†	1545
WARD COUNTY—		
Empire O&R Co., McDonald 13	66	2460
McDonald 14	1579	2480
Grisham-Hunter Corp.-Pat Hill, M. Himmel-Amerada 2	305	2395
Gulf, E. W. Estes 7	¶6 & 5002	2600
G. W. O'Brien 74	386	2770
Pat Hill et al, Clements-Sun 5	720	2310
Clements-Sun 6	325	2342
Humble, L. Richter 9	1164	2940
Chas. F. Kolp et al (was Messinger), Hartage-Wilson 2	84	2598
J. F. York 2	242	2550
Fred G. Leidecker et al, Wristen-Gulf 1	*	3111
Richardson Oils, Inc., J. H. Hathaway 13	555	2656
Rio Bravo Oil Co., D. Olcott 13	379	2455
WINKLER COUNTY (Henderson Field)—		
Humble, J. B. Walton 4-C	8500	3110
WINKLER COUNTY (Sayre Field)—		
Gulf, L. Daugherty 11	648	3000
Humble, N. R. Colby 5-C	1045	3050
Magnolia, J. B. Walton 42	443	2989
J. B. Walton 43	1059	2980
J. B. Walton 44	959	2964
Sinclair Prairie, F. S. Vaden 1 (14.8-ac)	165	3125
J. B. Walton 9-B	981	2975
J. B. Walton 7-C	1025	2980
Skelly Oil Co., N. R. Colby 3	1500	3110

*Failures; †Junked; ¶Million cu. ft. gas.

PASSES RECORD
Cooke County try for Ordovician getting deep

Wichita Falls.—Sinclair Prairie Oil Company and Sunray Oil Company's A. C. McCall 2, projected Ordovician lime test for the Sivells Bend area, Cooke County, was drilling in sandy-shale at 7610 feet, according to late reports. This wildcat is the deepest of a group seeking production from the deep zones in North Texas counties, and has exceeded previous depth records for the district by a wide margin.

Olson Drilling Company, James H. Gardner, Broswood Oil Company et al's D. R. Utiger 1, scheduled 6000-foot test for the Preston Anticline in Grayson County, was logging hard chert while drilling at 1785 feet. About 835 feet of this hard formation has been negotiated. In Montague County, Percy Frost et al's J. E. Johnson 1, located on a 3200-acre block about 9 miles southwest of St. Jo, is reported to have logged oil saturation in sand at 2550-2552 feet, but encountered shale in deepening. It is contracted to go to 4000 feet.

In Collin County, E. A. Parkford et al's Mrs. W. L. Fagg 1, SEc 38-acre tract, Jas. Rutherford Survey, 2 miles northeast of Blue Ridge, has plugged back from 2776 feet to within a few feet of the 7-inch casing seat at 2655 feet to re-drill the top section of the Paluxy sand series. This wildcat showed fresh water with a trace of free oil when tested last November 18 at 2771 feet.

The Canyon lime and sand section is the object of a projected 4000-foot test for western Foard County to be drilled by Chas. A. Fluty, Oklahoma City, and others on a block of 4000 acres. The block centers upon the east portion of the Jas. Bowie Survey, 4 miles east of production on the Les K. Johnson ranch held jointly by The Texas Company and Sun Oil Company. J. H. Howell et al have contracted to start a test prior to February 1, 1937, a short distance northwest of the Johnson ranch production and in Cottle County, as part consideration for lease on two sections of the Tom L. Burnett ranch. Location is due to be made in SWc Section 26, Block L, S. P. RR. Co.

Extension of the west portion of the Rathke field, Young County, a quarter-mile was attained last week by Jerome McLester, Lupton et al's Betty Medlan 1, which was showing for a good producer after 30-quart nitro shot at 3708-3750 feet. Prior to shot this outpost swabbed 125 barrels oil in 6 hours from broken sand at 3716-3750 feet.

DEEP WELL SHOWS

San Angelo.—Loffland Bros. Company's J. B. Tubb-Gulf 2, Sand Hills field, Crane County, sprayed two barrels of oil per hour with gas yield rated at 9,000,000 feet daily after knocking out bridge formed when shot with 180 quarts of nitro in lime at 4295-4350 feet. This well is bottomed at 4650 feet, and is producing from a lower section of the Permian lime than other wells on adjoining leases. Two members of the crew were injured when the well suddenly cleaned itself while removing the bridge.

Gulf Oil Corporation's Waddell et al 1, second Ordovician lime test for the Sand Hills structure, bailed six barrels of oil and 138 barrels of salt water in 20 hours while preparing for shot in Simpson zone. The hole was plugged back from 6709 feet to 6186 feet after testing sulphur water in Ellenberger topped at 6507 feet, or 3888 feet below sea level.

John I. Moore et al's Barnsley 1, located 5 miles southeast of production, was drilling at 6280 feet with the Ordovician lime as its goal.

Pampa, Texas.—Phillips Petroleum Company's G. W. Porter 1, C NE SW Section 35, Block A-8, H&GN Ry. Survey, Wheeler County Ordovician lime test, has apparently passed through the granite wash beds after negotiating about 4000 feet of this formation in drilling to 7020 feet, where the hole is bottomed in black shale. Considerable trouble from cavings has appeared since drilling through the granite wash zone, which was topped near the 3000-foot level, with an elevation of 2405 feet.

NORTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
L. T. Burns et al, L. F. Wilson 1-EE, sec 114	12	1258
Deep Oil Dev. Co. et al, L. F. Wilson 3, lse. 5, sec 75	122	2227
Kimbell & Bohner, J. D. Carpenter 15, sec 89	10	1045
J. T. Miller et al, J. E. Roller 1	*	1306
Shappell Oil Co., John Cannon 1	*	1126
White & Duncan, J. L. Webb 2, blk 8	*	739
BAYLOR COUNTY—		
Ingleright et al, H. T. Cope 1, sec 3122	*	1735
COOKE COUNTY—		
Anderson-Kerr Pet. Co., Wilson 3	168	2046
Wilson 5	*	1996
Bridwell Oil Co., R. W. Trew 6	25	1636
Burk Royalty Co., T. C. Davidson 2	15	1955
Wm. G. Mappes et al, W. R. Harper 1	*	1667
F. W. Merrick, Inc., Stelzer 14	5	822
FOARD COUNTY—		
The Texas Co., Les K. Johnson 8	160	3557
JACK COUNTY—		
Bennett Pet. Corp., W. J. Chambers 2	427	3010
Hill & Hill, CRI&G RR Co. 2	275	2996
J. R. Meeker et al, Mrs. D. C. Clayton 2	385	3000
Texas Plains Oil Co., W. H. Terrell 5-B, blk 11	*	705
MONTAGUE COUNTY—		
Continental Oil Co., W. W. Jones 10	90	861
WICHITA COUNTY—		
E. G. Boardman et al, J. L. Jackson 1, blk 27	*	718
L. T. Burns et al, Karl Goetze 1	10	797
Dinsmore & Stipe, G. W. Lewis 1, blk 20	*	1001
King Oil Co., Waggoner Est. 9-J	43	1463
Tom B. Medders et al, J. L. Jackson 3-C	*	710
Mogren & Anderson, E. E. Goetze 36	15	913
Luther Webb et al, A. J. Schulz 1	*	2032
YOUNG COUNTY—		
Associated Developers, Inc., E. G. Williamson 1-A, sec 286	*	3000
W. F. Collins et al, N. L. Hardy 1, sec 260	30	609
Corvette Oil Corp., W. A. Rushing 1, sec 3401	*	1001
J. P. Doss et al, D. M. Spearman 1	*	580
Fresno Oil Co., J. W. Cox 1, blk 18	*	622
L. G. Hawkins et al, J. M. Kirkland 7, sec 2249	15	705
J. J. Moran et al, W. B. Howard 14, sec 3401	90	907
Morris & L. Spoonts, H. K. Weems 1, sec 626	*	667
Owenwood Oil Corp., G. P. Stewart 1-C	*	950
G. P. Stewart 1-D	*	891
Sams & Meyer, I. E. Self 4	3	754
White & Duncan, Prideaux 2-A	90	758

*Failures; †Junked; ¶Million cu. ft. gas.

Fault Turns

TALCO-MEXIA PLANE SHIFT FOUND AT SULPHUR BLUFF

WEEKLY STAFF REPORT

Mount Pleasant, Texas.—An abrupt turn in the course of the Mexia-Talco fault plane, which is responsible for the accumulation and trapping of oil production in the Paluxy sand section in the Sulphur Bluff field, Hopkins County, is indicated by a late completion and drilling test in the west portion of the field. The fault plane lies in a northeast-southwest trend, with production on the south, or upthrow side. It was generally assumed that production would continue for some distance, but new developments tend to shift the southwest trend more pronouncedly to the south, possibly eliminating leases that were assumed to be within the producing area. However, the shift in the course of the fault may be beneficial to a greater number of lease owners.

Dilworth S. Hager, W. P. Luse and Russ Petroleum Company's J. E. Worsham 7, located in the northwest corner of their 192.26-acre discovery lease, cut through the fault plane between 4280 feet and 4290 feet, according to reports. Worsham 4, located in the northeast corner of the same lease cut the fault at 3160 feet. Hager and Luse's J. G. Reynolds 1, SEc of 200-acre tract, and 660 feet south and west of Worsham 7, crossed the fault at 3860 feet, with an elevation of 420 feet, and was coring for the Paluxy sand zone late last week. The latter will make a producer, but its relative position to the fault tends to indicate that tests drilled several locations to the north and west may miss the upper oil zone, or the entire pay formation. Worsham 7 gauged 11 barrels of 23.9 gravity oil per hour natural on preliminary gauge through open tubing from Paluxy pay at 4479-4517 feet, with an elevation of 427 feet. A better flow is expected to follow when tubing is raised. Worsham 5, northwest offset to the discovery well, gauged 83 barrels per hour through open casing and tubing from broken pay at 4456-4521 feet, and later flowed 60 barrels oil per hour through tubing.

1900 Pounds Bottom-Hole Pressure

Bottom-hole pressure readings taken by R. H. Maples, production engineer for Empire Oil & Refining Company, on Hager-Luse-Russ' Worsham 4, showed 1900 pounds pressure per square inch at the 4400-foot level, and a temperature of 147°F. Pressure readings taken in this flowing well at 1000-, 2000-, 3000-, 3500- and 4000-foot levels, showed the average weight of oil per foot of depth to be .412 pounds per square inch.

Talco Moving Fast

Development of the Talco field is moving forward at a fast rate. Humble Oil & Refining Company is starting a major drilling program, and a large amount of field work is being carried on by Magnolia Petroleum Company and G.M.W. Oil Company, Dallas. The latter is confining the bulk of its developments to Talco town lots. Revival of interest in the west end of the field and in Franklin County is expected to result from the pending completion of Magnolia Petroleum Company's O. S. Maxton 1, SWc of 160-acre lease, W. M. Evans Survey, with the hole bottomed at 4289 feet, or 3916 feet sub-sea. Favorable oil saturated sand was logged at 4226-53 feet and at 4275-80 feet. A west offset drilled by Humble Oil & Refining Company was completed as a small pumper, while L. S. Flannery et al's Hedrick 1, a southwest offset, reached bottom hole water in drilling to 4369 feet, and junked the hole while trying to plug back.

Gulf Oil Corporation has elected to forego an opportunity to participate in the development of Paluxy sand production in the Talco field as well as the Sulphur Bluff field, but retains deep producing rights in both areas in disposing of its leases to independents. Three large tracts held in the Sulphur Bluff field, including a 225-acre tract offset by flowing production on the east and west, were sold more than a month ago to F. D. Jones Drilling Company, Dallas, et al, for a nominal cash bonus, plus 3/32 over-riding royalty. Operating control of 2620 acres, including about 400 acres rated as proved for Paluxy production, have been assigned by Gulf Oil Corporation from its Talco structure "play" to Byrd & Frost, Incorporated, and Lucey Petroleum Company, Dallas, for a reported cash consideration of $75,000, plus an oil payment of $1000 per acre from each productive lease. The purchasers have developed one lease at Talco, and own the Talco Pipe Line Company, while plans have been made to erect a refinery to operate on this crude. An active drilling program will be launched on the proven acreage assigned by Gulf Oil Corporation.

Gulf Oil Corporation has a surplus of sulphur contaminated low gravity crude above its refinery requirements in West Texas, where it is the largest producer, and would be greatly inconvenienced in its pipe line setup in East Texas if forced to absorb its probable production from the Paluxy zone. Paluxy oil production will not be moved by majors through main line carriers in alternate batches with sweet oil production, especially the high grade oil found in East Texas field.

FIND PALUXY DRY

Humble's Eastern 1 drills 61 feet into formation

Tyler, Texas.—Penetration of 61 feet of the Paluxy sand series by Humble Oil & Refining Company's Eastern 1, eastern Rains County Trinity sand test, failed to yield oil or gas showings. The test was coring in hard, fine-grained sandstone below 6140 feet December 11, and will continue to the lower Glenrose member of the Trinity in complying with the 7600-foot contract depth. Top of Paluxy was logged at 6079 feet, or 5641 feet below sea level.

This geophysical prospect failed to register any appreciable structural relief in drilling to the Paluxy zone. It encountered 1076 feet of Georgetown-Fredericksburg section, topped at 5003 feet, a normal thickness for the general area.

A heavy duty rotary rig was moved in late last week by Superior Oil Company of California to proceed with the drilling of a 6500-foot Trinity test on its expensive fault line block in the Quinlan area, southern Hunt County. The location, as previously announced, will be on the P. B. Paul 183-acre tract, Mary Latham Survey, about five miles northeast of Quinlay. The company paid $175,000 cash last spring for about 4500 acres out of block held by W. A. Moncrief, Eddie Showers, Ed Hyde and W. L. Pickens, and also contracted to carry these independents for a half interest in a free test.

The projected Trinity test of the Mexia field previously credited to A. H. Grider, Mexia, et al, on the W. B. Kendrick-Pure tract has been temporarily abandoned.

215 TEXAS PERMITS

Austin.—The Railroad Commission approved last week permits for drilling 215 new wells in Texas, 62 more than were allowed the week before.

North Texas led the list with 80 locations, which included 42 from Young County, 22 from Jack County and 10 from Archer County. West Central Texas operators listed 18 new permits.

Southwest Texas reported 38 permits with 12 in Duval County. There were 33 from the Gulf Coast with 15 in Nueces County.

East Central Texas listed 20 locations and only two were filed for wells in the East Texas field.

There were 13 permits from West Texas and 11 from the Panhandle.

Commissioners were considering over the week-end applications for some 200 permits which had been filed as exceptions to the regular spacing rule.

EAST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Atlantic Ref. Co., E. L. Pinkston 15-D (108-ac)	3600	3677
T. J. Carter et al, P. Tipps 1 (53-ac)	600	3629
Chicago Oil Co., J. R. Alford 5 (22½-ac)	1000	3597
Georgian Corp., R. E. L. Wood 2 (9.45-ac)	100	3808
Gulf Oil Corp., W. O. Alford 9 (157.05-ac)	250	3782
Humble, E. S. Holt 9 (51.43-ac)	8000	3814
Kangerga 61-A (333⅓-ac)	4600	3715

Company, Well and Location	Init. Prod. Bbls.	Depth
Ohio Oil Co., M. C. DeGuerin 20 (160.7-ac)	4200	3689
Royal Pet. Corp., Sol Dennis 2	55	3682
Sinclair Prairie, A. S. Jarvis 13-B (106.9-ac)	3500	3693
G. Patterson 10 (162.67-ac)	2500	3680
Stanolind-Pure, Ras Lacy 3 (100-ac)	100	3628
W. H. Siler 64 (983.53-ac)	1200	3638
W. H. Siler 65 (983.53-ac)	1200	3680
W. H. Siler 66 (983.53-ac)	1000	3658
KILGORE AREA—		
Perry Allen et al, C. N. Dickerson 6 (31.7-ac)	80	3568
J. G. Beard et al, J. S. Elder 6 (72.16-ac)	75	3543
Central Commercial Oil Co., King-Shell 9 (44.4-ac)	3000	3713
Max Decov et al, Church Lot 2	5500	3664
Gulf Oil Corp., F. Birdsong 13 (98.42-ac)	7300	3579
W. Holt 24 (185.12-ac)	4000	3592
Jones-Shelburne, Inc., Crim Mercantile 6 (67.4-ac)	600	3691
Magnolia, J. C. Bradberry 13 (90-ac)	10,500	3688
R. H. Still 7 (45-ac)	80	3555
Royal Pet. Corp., F. A. Taylor 6 (40-ac)	240	3620
Shell, M. H. Bivins 17-A (113.4-ac)	9000	3576
Sinclair Prairie, J. E. Lawther 24 (317.68-ac)	2500	3544
Smith-Bohlssen Oil Co., M. R. Terrell 5 (67½-ac)	500	3676
Sun Oil Co., J. S. Elder 11 (75-ac)	4200	3558
Sun-Seaboard Oil Corp., M. T. Cole 47 (266.17-ac)	5000	3531
Tide Water Associated, M. G. Barton 30 (194-ac)	5800	3554
J. R. Beall 11 (80-ac)	5400	3641
LONGVIEW AREA—		
Atlantic Ref. Co.-J. K. Wadley, T. W. Lee 15 (110-ac)	8800	3682
Barnett Pet. Co., G. C. Cannon 3-B (40-ac)	800	3700
Deep Rock Oil Corp., B. Jones 20 (61.12-ac)	10,000	3590
Humble, H. Castleberry 13 (244½-ac)	1500	3451
Magnolia, J. H. Beavers 8 (73¾-ac)	9600	3542
A. J. Green 10 (41.43-ac)	7700	3638
P. H. Pewitt et al, L. A. Williford 3 (133-ac)	500	3686
L. A. Williford 17 (133-ac)	500	3677
P. F. Rutledge-C. W. Boller, P. Todd 17 (155-ac)	1200	3752
Selby O&G Co.-Lewis Prod. Co., Snavely 15-C (118.3-ac)	7000	3686
Shell, J. Moore 33 (303.7-ac)	9000	3570
Sinclair Prairie, J. W. Akin 15-A (96.6-ac)	10,000	3614
M. Moncrief 52 (307.7-ac)	11,000	3600
Southland Drlg. Co.-United E&W Oil Co., O'Byrne 29 (304-ac)	300	3750
O'Byrne 43 (304-ac)	1500	3715
Sun Oil Co., J. C. Gray 14 (101½-ac)	1500	3596
Stanolind, G. E. Fenton 16-A (77.64-ac)	3500	3622
Vera Oil Co., H. B. Owens 7 (50-ac)	1200	3801
ANDERSON COUNTY (Cayuga Field)—		
T. L. Sessions et al, C. S. Hurt 1, (3.3-ac)	100	4042
FRANKLIN COUNTY (Talco Field)—		
Housh & Thompson, Inc., C. L. Owings 4, (109-ac)	500	4310
Neversuch Oil Co., F. A. Jones 1 (30-ac)	*	4348
HOPKINS COUNTY (Sulphur Bluff Field)—		
Hager-Russ-Luse, J. E. Worsham 5 (192.26-ac)	1500	4521
J. E. Worsham 7 (192.26-ac)	250	4517
TITUS COUNTY (Talco Field)—		
G.M.W. Oil Co., W. D. Cato 2 (12¼-ac)	720	4370
Talco Townsite 26-A, C Lot 4 Blk. 32	720	4370
W. B. Hinton et al, J. Hargraves 4 (133.29-ac)	600	4342
Hollandsworth Drl. Co., J. M. Morris Atlantc 6 (20-ac)	300	4372
Housh & Thompson, Inc., C. M. Carr 2 (33.28-ac)	1000	4339
Humble & Adams-Lyles, Inc., J. R. Milligan 2 (80.81-ac)	380	4320
Magnolia, C. W. Belcher 3 (80-ac)	600	4318
Alex McCutchin-M. C. Gaston, 1st Nat'l Bank 1, Lot 3, Blk 29	150	4355
Rozel Oil Corp.-E. M. Clem, Methodist Church 1, Lot 2, Blk. 36	289	4322
UPSHUR COUNTY—		
Bell Oils, Inc.-Bennet Pet. Corp.-B. L. Watson, W. O. Irvin 1 (249-ac)	*	3890
FANNIN COUNTY—		
L. P. Kean et al, R. L. & W. M. Kelley 1 (160-ac)	*	2902

*Failures; †Junked; ¶Million cu. ft. gas.

Saxet Keeps Lead

CLARA DRISCOLL AREA IN FOR PLAY IN DEEPER HORIZONS

WEEKLY STAFF REPORT

Corpus Christi.—Saxet field, Nueces County, may be expected to keep the lead in South Texas Gulf Coast development for many months to come as more deep tests uncover new deep oil and gas sands. While the 5800-foot horizon is not completely drilled, new operations are being directed toward sands at 6300, 6700 feet and deeper.

Lonnie Glasscock's J. B. Hunter 2, near the heart of the field, drilled to 6741 feet, 21 feet in gas and distillate sand, where the well could have been completed as a wet gasser. Inasmuch as Glasscock does not hold the gas rights, he plugged back and set casing at 4493 feet to perforate in one of the regular horizons of the field.

The above sand showed as a gasser in another well in the field, indicating that it is a rather general body. In an attempt to find oil production on the flank of this sand lens, two wells are drilling ahead to make tests within the next day or so. Hiawatha Oil Company's Griffith 6 is below 6480 feet, while Phillips Petroleum Corporation's Rand Morgan 4 is down 6400 feet.

Deeper at Clara Driscoll

Clara Driscoll area, also in Nueces County, comes in for a play with new deeper sands being uncovered. Two miles northwest of this production, W. L. Hinds and Phillips Petroleum Corporation's Sevier 1-A drilled to 6608 feet, set casing and perforated about 5850 feet, the exact depth being withheld. It is now flowing about two barrels of distillate and a large volume of gas per hour through ⅛-inch choke and showing pressures of 1950 and 2050 pounds on tubing and casing. A high-pressure separator is being installed. Southeast of the same field, Wellington Oil Company and Pan American Production Corporation's Sevier 1-A drilled to approximately 6100 feet, ran an electric formation tester and is preparing to set casing to test several sand sections logged between 4000 feet and the total depth.

More new producers in the 3800-foot sand in the main field, plus additional wildcats in the general vicinity of the producing area, indicates that Clara Driscoll will be the next hot spot of Nueces County. Farther southeast, Allen and Seaboard Oil Corporation's Chapman 1, Section 80, has been abandoned at 7205 feet. It is one of three deep wildcats drilling in this sector of Nueces County. To the southwest and on the Stratton prospect, Camp Production Company's Wardner 1, is preparing to spud on a deep test.

Gregory Area

In the Gregory sector of San Patricio County, Texon Royalty Company's J. H. Harvey 1 is drilling below 4500 feet, having logged a gas sand at 3836-47 feet. Several miles to the south, Hooper & Rutherford's J. D. Willis 1 ran an electric formation tester at 7190 feet and is drilling ahead. Offsetting the well on the west, Eleanor Oil Company's Kline 1, made a production test, but showed only salt water under 100 pounds pressure. The depth was not given, but it is believed to have been from 6297-6305 feet, where casing recently was perforated. The hole is bottomed at 6851 feet.

West Premont Gas Extension

Tom Graham's William Singer 1, north offset to his Bennett 1 in the West Premont area, Jim Wells County, perforated casing at 3154-64 feet and has been completed as a gasser through ⅛-inch, pressures being 1400 and 1200 pounds on casing and tubing, respectively. The well had drilled to 3400 feet. It opens a second sand for the west extension of the field, the first being at 2340 feet.

Mills Bennett has started operations on J. W. Williams 1, a new wildcat in Lot 2, M. Lopez survey, on the Green Lake prospect in Calhoun County. This particular prospect has been looked upon with great favor by a number of operators and several tests have been drilled.

Tide Water Oil Company's E. G. Landgrof, deep test on the prospect just north of Hynes Bay, Refugio County, is going ahead at 8400 feet, with no announcement made as to just how much deeper it will be drilled. Two other tests are to be drilling within the next few days in this immediate area.

R. B. Bryant and H. H. Howel's Antone Kocurek 1, Nueces County wildcat, cratered December 11 after blowing out late the preceding day from a 3100-foot sand. The well was reported to have started burning from the heavy gas blow, but this could not be confirmed. It is 3500 feet northwest of production in the Buckholt pool and just south of the Clarkwood town site production in the Saxet field. The 3100-foot horizon is the source of production in the Buckholt area.

AGUA DULCE HEARING

Austin.—A hearing on the Agua Dulce field in Nueces County has been set for December 19 in Austin.

At this hearing, the Railroad Commission will investigate the necessity for drilling a directional well as a means of killing Driscoll 2, owned by Texon Royalty Company, which blew out and cratered.

SOUTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
Paul C. Teas' Clement Vinklarek 1, 2972 ft wl, 330 ft nl 100-ac tr, S. Millet league	*	7142
BEE COUNTY—		
Luling O&G Co., J. T. Borroum Est. 1, Chas. Baker sur, ab 112 (Caesar)	*	3056
Miller-Donzi's Oil Corp., A. M. Holzmark 1-B, 1245 ft sel, 1802 ft swl Samuel May sur (Foley)	500	4075
BROOKS COUNTY—		
Nordan & Morris, Wm. Singer 4, sur 312 (Alta Verde)	*	935
Dick Young, Wm. Singer 5, blk 12, sur 312 (Alta Verde)	*	1002
BEXAR COUNTY—		
Roger Putnam, Simon & Anna Wetz 3, J. S. Simpson sur (Von Ormy)	8	668
CALDWELL COUNTY—		
Lincoln Pet. Corp., T. Harry Brown 3, D. Cooper sur, (Branyon)	120	2240
Taylor Ref. Co. et al., F. M. Branyon et al 2-A, D. Cooper sur (Branyon)	25	2176
CALHOUN COUNTY—		
Portilla Drlg. Co., P. H. Welder 1-C, Agaton Sisneros sur (Heyser)	960	5477
DUVAL COUNTY—		
Mills Bennett Prod. Co., Ira G. Yates 4, 330 ft nl and wl of sec 467	*	3516
Bridwell Oil & Gorman-Yoakam Dr. Co., W. K. Hoffman 1, 990 ft nwl, 330 ft nel of BS&F sur 117 (Hoffman)	50	2810
Cox & Hamon, W. R. Peters 5, sur 322 (Lopez)	360	2106
W. R. Peters 22, sur 322 (Lopez)	360	2139
W. R. Peters 24, sur 322 (Lopez)	350	2148
N. V. Duncan, Worden & Drought 1, 750 ft nl, 1740 ft 41 sur 151 (Chara Mousca)	*	1701
Humble, A. H. Badgley 14, sur 307 (Seven Sisters)	1000	2524
A. H. Badgely 15, sur 307 (Seven Sisters)	900	2507
M. C. Hubberd 16-B, sur 83 (Loma Novia)	850	2740
T. D. Smith 35, sur 382 (Seven Sisters)	1000	2469
T. D. Smith 36, sur 382 (Seven Sisters)	800	2455
Magnolia, S. Benavides 17, blk 13, O'Hern & Seacord subd, sec 174 (Cole)	100	2837
C. W. Hahl 50, sur 67 (Loma Novia)	250	250
Mrs. Emma Herbst 6, sur 70 (Loma Novia)	40	2732
M. G. Peal 27, sur 383 (Lopez)	¶5	2103
The Texas Co., DCRC 1-C, Comm w cor sur 56, 2970 ft se along swl, thence 330 ft sw at rt angles in sur 194	*	2123
Wellington Oil Co., J. F. Welder heirs 19, sur 383, (Seven Sisters)	850	2465
Westheimer & Daube, Z. Campos 25, sur 224 (Seven Sisters)	750	2716
W. L. Wollett & M. D. Masten, Bishop Duval Land Co. 1, 330 ft sl and wl of se¼, sec 74	*	3507
GOLIAD COUNTY—		
Magnolia Pet. Co., Weldon & Lackey 6, J. Gomez sur, (N. Pettus), pb td 3724, perf 3714-24	200	4050
GUADALUPE COUNTY—		
Detroit Texas Dev. Co., N. J. Carter 1, 625 ft swl (road), 170 ft nwl of 300-ac tr	200	2356
JIM WELLS COUNTY—		
Tom Graham, Wm. Singer 1, SK&K sur 215 (Premont) perf 3154-3164	¶20	2400
KARNES COUNTY—		
R. L. Barnett, Fee 2, 5900 ft to s cor 1250 ft sel Alex Hunter sur..	*	2500
KLEBERG COUNTY—		
Clark et al, A. V. Kivlin, blk 8, sec 39, KT&I subd (Kingsville)	*	2332
LIVE OAK COUNTY—		
Loma Oil Co., O. M. Withers 3, 220 ft s of rd, 220 ft wl tr, J. Sparks sur 16 (N. Jacob)	*	1010
McMULLEN COUNTY—		
Loma Oil Co., L. Jacob Corp. 7-F, John Fadden sur (Jacob)	*	890
L. D. Ormsby, J. W. Griffith 10, 185 ft sw No. 9, 1560 ft nl, 940 ft wl B. Sparks sur, ab 794	*	940
NUECES COUNTY—		
I. J. Allen & Seaboard Oil Corp., J. O. Chapman et al 1, 660 ft nl & el sec 80, Laureles Farm tr, Rincon de Corpus Christi gr.	*	7205
Allen & Morris, Hocker & Sevier 1, Villareal gr (Saxet)	500	4840
W. C. Brady, L. A. Simonton 1, lots 46, 47 Country Club Place add (Saxet Heights)	560	4085
Conservative Oil Co., Rand Morgan 2-B, BS&F sur 403, (Saxet)	850	5831
Houston Oil Co., E. McGregor et al 10, sur 582 (Saxet)	800	5821
E. McGregor et al 11, sec 311 (Saxet)	656	5819
Humble, J. Miller 1, blk 26, sur 47, Flour Bluff & Encinal Gardens tr (Flour Bluff) perf 6647-58	500	6660
L. A. Webb 1, lot 11, sec 47, Flour Bluff & Encinal Gardens tr (Flour Bluff)	500	5580
A. A. Webster 1, lot 23, sec 48, Flour Bluff & Encinal Gardens tr (Flour Bluff) perf 6649-59	750	6661
Magnolia, Clara Driscoll Sevier 1, Robert Russell sur (Clara Driscoll)	500	3820
Pan American Prod. Corp., J. Sagarin 3-A, CEPI&M sur (Saxet)	650	5828
Renwar Oil & C. Andrade, Fred Frank 3, sur 416, (Saxet)	700	5834
Renwar Oil Corp. & Maryland Oil, Guaranty Title & Trust 2, lot 6, blk 9, Villa Gardens (Saxet Heights)	350	4094
Rand Morgan 4, sur 592 (Saxet) perf 4554-57	450	4570
Republic Natural Gas Co., J. K. Ordner 1, sec 403, Shaeffer Lands sub (Saxet)	800	5828
Richardson Pet. Co., Cain & Sechrist 4, Russell Farm Lot 23 (Saxet)	850	4569
Texon Dr. Co., Carter, Ocker, Till 4, J. R. Ward sur 316 (Saxet)	560	4445
Isensee Home 2, C. Land sur 404 (Saxet)	650	4425
J. J. Scoggin 5, GC&SF sur 315 (Saxet)	650	4440
United Prod. Corp., W. W. Walton 2, W. W. Chapman Lands subd (Agua Dulce)	200	5346
Sam Wilson, Jr., Glover Johns 2, blk 10, Oak Park add (Saxet Heights)	300	4076
Wynn Dr. Co., Rand Morgan 3-A, sur 315 (Saxet)	250	4438
REFUGIO COUNTY—		
Hewitt & Dougherty, M. F. Lambert 34, Swisher sur 5 (Tomoconnor) perf 5794-5804	1200	5912
Quintana Pet. Corp., Tom O'Connor 41-A, Swisher sur 5 (Tomoconnor) perf 5815-33	1200	5896
Tom O'Connor 8-C, G. W. Main sur (Tomoconnor)	2500	5916
SAN PATRICIO COUNTY—		
Humble, J. W. Mayo 10, Ottman sur (Taft)	550	4937
STARR COUNTY—		
South Coast Oil Corp., Isabel S. Lopez 1, 771 ft nl, 282 ft wl, lot 11, sh 29B, porc 80	*	3508
VICTORIA COUNTY—		
Harrison & Abercrombie, C. O. Vess 5, J. M. Brownson sur (Placedo)	250	4766
Magnolia Pet. Co., Henderson-Pickering 3, Wm. Rupley sur, ab 290 (Placedo) pb td 4775	150	4792
WEBB COUNTY—		
Ivan Howard et al, Frost Nat'l Bank 4, 330 ft w and 330 ft n of nw cor sur 123, on sur 770	*	2001
Porter & Blanchar, S. Benavides 8, blk 315, Hale subd Arispe gr (Cole)	325	2911
Smith & Hamill, S. Benavides 14, blk 312, Hale subd, Arispe gr (Cole)	650	2902
S. Benavides 15, blk 311, Hale subd, Arispe gr (Cole)	650	2897
ZAPATA COUNTY—		
Gilcrease Oil Co., A. D. Haynes 17-C, e¼ sec 8, Haynes Ranch subd, Comitas gr (Comitas)	40	963
H. & R. Oil Co., M. Garza Est. 5, blk 11, Douglas subd, Zorro Ranch Comitas gr (Escobas)	25	1240
H. & R. Oil Co., M. Garza Est. 6, blk 11, C. A. Douglas subd, Zorro Ranch, Comitas gr (Escobas)	60	1244
Glen Harroun, M. Garza Est. 3, blk 10, Douglas subd of Zorro Ranch, Comitas gr (Escobas)	*	1820
Magnolia Pet. Co., A. D. Haynes 2, sur 7, Haynes subd, Comitas & Villa gr (Comitas)	60	1062
A. D. Haynes 6, blk 7, Haynes subd, Comitas & Villa gr (Comitas)	55	1111
B. W. Roscoe, C. Bustamente 5, sh 33, Fansler Partition, Comitas gr (Escobas)	60	1208
Upchurch & McKay, A. D. Haynes 16, blk 7, Haynes subd, Comitas & Villa gr (Comitas)	50	1056
United Prod. Corp., A. D. Haynes 7, blk 13, Haynes subd, Comitas & Villa gr (Comitas)	50	982

*Failures; †Junked; ¶Million cu. ft. gas.

NEAR SHOW DOWN
Important and deep Rio Grande tests due

Mission.—Outcome of several of the most important wildcats in the Rio Grande Valley district of South Texas is expected within the next several days, as wells reach critical depths. This especially is true on several deep Hidalgo prospects.

McCollum Exploration Company's J. C. Engleman, Jr., 1-B, is making hole below 6000 feet, while James McDougal is below 6750 feet. Both wells are in the La Blanco area, where a 7800-foot wild gasser recently opened a new field by blowing out and running wild.

Near the above prospect, Union Sulphur Company's American 10, 4500 feet northeast of the Mercedes field, is cutting out tubing at 7450 feet, the total depth being 8306 feet.

H. J. Porter's Sweeney 1-A, another deep test for this county, was shut down for repairs at 5565 feet.

F. Davenport and Slick Urschel's T. B. Slick Estate 1, 17 miles northeast of Rio Grande City, cored sand and sandy shale streaks between 4985 and 5030 feet. A drill-stem test failed and another test was being made late in the week.

The California Company was running 9⅝-inch casing in Mestina Oil & Gas Company 1, nearly one mile west of the Alta Mesa field, Brooks County, after drilling to 3032 feet. In the field, this company is reconditioning mud after controlling a blow out at 2448 feet, which stuck the drill stem.

BOOSTS DUVAL
Hoffman area well to stimulate drilling

Laredo.—A new Loma Novia sand producing spot has been established in northern Duval County, which should bring an immediate drilling campaign of a number of wells. Bridwell Oil Company and Gorman-Yoakam Drilling Company's W. K. Hoffman 1, eastern portion of Section 117, and one mile east of the Hoffman field, is a 50-barrel-per-day pumper in the upper Loma Novia sand at 2800-10 feet.

This well, while in close proximity of the field, is believed to be in an entirely new lens, rather than an extension to that field. This is typical of the sand sections through this district.

OIL AT OAKVILLE

Beeville.—Oil production in the Oakville field of Live Oak County was assured with Ohio Fuel Supply Company's H. J. Rosebrock 1 setting casing to complete at 2808 feet in the Pettus sand. The well topped the sand at 2797 feet and on a drill-stem test at 2800-08 feet, developed 106 feet of oil with 100 feet of drilling mud in 14 minutes.

The test showed considerable gas in the top 3 feet of the sand. It is in the L. Romero survey, northeast side of the field and nearly ½-mile northeast of Simmons Oil & Gas Company's McGriff gasser in the same horizon.

This discovery tends to lengthen the oil

trend of the Pettus area. It is on same trend of faulting with the Caesar and Plummer fields, but 15 miles down strike. The Plummer field, which was discovered as a gas area last year, recently was converted into an oil field by a discovery by W. C. McBride, Inc.

Wildcatting is generally active through this trend with more new tests being commenced to explore Cockfield and Yegua sands.

NAGADOCHES TEST

Houston.—J. C. Bonham's Angelina Lumber 1, Gomez Survey, in Nagadoches County, is at 5963 feet after coring Blossom sand from 5465-86 feet and finding oil and salt water. The well, which has an elevation of 241 feet, topped the Austin chalk at 5825 feet and is now in that formation. Base of the Pecan Gap was found at 5320 feet, top of the Taylor at 4833 feet and top of the Navarro at 4683 feet.

HOUSTON A. P. I.

Houston.—The Gulf Coast chapter of the American Petroleum Institute Division of Production will hold its regular monthly meeting at 7:30 p.m. on Tuesday, December 15, in the Chamber of Commerce auditorium. At this meeting the annual election of officers will take place and the safety division of the American Petroleum Institute will furnish the remainder of the program.

Hitchcock Produces

DEEPEST TEXAS COAST HOLE MAKES GAS AND LITTLE OIL

WEEKLY STAFF REPORT

Houston.—The second oil field to be discovered by Shell Petroleum Corporation during 1936 was opened December 7, when Maco Stewart 1, Hitchcock prospect, J. Spillman Survey, Galveston County, came in flowing a half-barrel of 33 gravity oil along with 3,500,000 cubic feet of gas daily from Miocene sand at 5130 feet after drilling nearly 2½ miles into the ground.

After drilling to 10,460 feet the hole was plugged back to 5170 feet and casing perforated from 5120 to 5130 feet. A drill-stem test there showed evidences of gas and oil. The well was washed December 7 and came in flowing gas with a small amount of oil through a quarter-inch choke with a tubing pressure of 1925 pounds; casing, 1275 pounds. At the end of the week pressure had equalized at 2050 pounds on tubing and casing.

At its total depth of 10,460 feet, Maco Stewart 1 was the deepest hole drilled in the Texas Gulf Coast. The Frio formation was encountered about 200 feet above bottom and after encountering the first

Shell Petroleum Corporation's Maco Stewart 1, new discovery well at Hitchcock, Galveston County, has one of the largest and best equipped rigs in the Texas Gulf Coast.

Test For New Field

BURLESON PROSPECT HAS EDWARDS LIME SHOW

San Antonio.—Preparations were being made late last week to drill plugs and test an Edwards limestone showing in Red Bank Oil Company's Nellie Gramm 1, Burleson County's prospective new field opener. The well topped the Edwards lime at 6226 feet and showed oil stains to 6241 feet, following which a drill-stem test developed 180 feet of oily mud and no sulphur water, test being through ¼-inch chokes, top and bottom. Following the 12-minute test, casing was set atop the limestone.

Should this well develop production, as is likely, it will open an entirely new play along the Balcones Fault zone, being a prospecting campaign for deep Cretaceous fields. The present deepest Edwards lime production is from 2500 feet, while the deepest Cretaceous oil production in South Texas is from the Austin chalk around 5600 feet in the Pearsall field, Frio County.

The Red Bank test is located 2875 feet from the south line and 1500 feet from the east line of the Santef survey and is 2500 feet northwest of the company's Crain 1, which several months ago developed sulphur water and oil in the Edwards limestone.

Another wildcat of interest in the Balcones Fault zone is Helvetia Oil Company's Susie Pratt 2, which showed a thick section of serpentine from 3085 to 3428 feet. This Atascosa County wildcat is on the Anchorage prospect, ½-mile southeast of the first test. Casing was set at 2971 feet after the hole was plugged back to 3250 feet.

December 11 the well continued to swab with only a small amount of oil showing in the returns. Should it fail to make a commercial well at this level, it will be plugged back and completed in the Taylor sand at 2398-2424 feet.

Paul C. Teas's project on the Fayette-Bastrop County line, and 10 miles south of Smithville, may receive another 7100-foot Edwards lime test as a result of a deal now pending. He found oil stains on the Edwards lime at 7122-42 feet in Clement Vinklarek 1, S. Millett League, 10 miles south of Smithville, and set casing. After perforating at 7123-29 feet, the well developed salt water on a swabbing test and abandoned.

W. D. Bacon and Gordon Mackenzie's O. D. Halm 1, 2 miles south of Kingsbury and in Guadalupe County, topped the Austin chalk at 1652 feet and cored to 1714 feet where it is showing considerable oil. December 11 preparations were being made to run casing for a production test. Should it produce it will be the second chalk well to open a Guadalupe County field this month.

hard sand formation it showed gas and kicked 14-pound mud out of the hole. Mud weight was increased to 16 pounds, but when going back in the hole the drill pipe stuck. The hole then was plugged back to 9293 feet and a drill stem test was made and then another was made at 8960 feet which showed a slight blow of gas.

This completion is similar to Sun Oil Company's Hughes 1 which also discovered a new field, at Greens Lake, in Galveston County. Hughes 1 was drilled below 9500 feet and plugged back to 3610 feet.

Swabbing Silsbee Well

Republic Production Company and Houston Oil Company's Brooks Fee 3, Silsbee area, J. W. Brooks Survey, Hardin County, looked doubtful as a producer December 11. Washed at 6979 feet it failed to flow and the plans were to start swabbing December 12.

The hole was carried down to 6979 feet after logging a sand at 6823 feet. A drill-stem test from 6900 to 6943 feet showed 400 pounds pressure and three joints of oily mud. The test was made in 7½ minutes through two quarter-inch chokes. Seven-inch casing was set at 6946 feet.

The first well drilled in the area blew out, caught fire and cratered at 6900 feet some time ago. Brooks 2 was a relief well to kill Brooks 1. After killing the burning well it was plugged back, redrilled to 6969 feet and showed salt water on a drill stem test. At the end of the week Brooks 2 was drilling in a sidetracked hole at 6067 feet.

New Gas Field

Felmont Oil Corporation will probably open a new gas reserve with possibilities of future oil production in General Mitchell 1 on the Spanish Camp prospect, De Wade Survey, Wharton County. At the end of the week seven-inch casing with screen on the bottom was being run for a production test of sands from 2980 to 3015 feet.

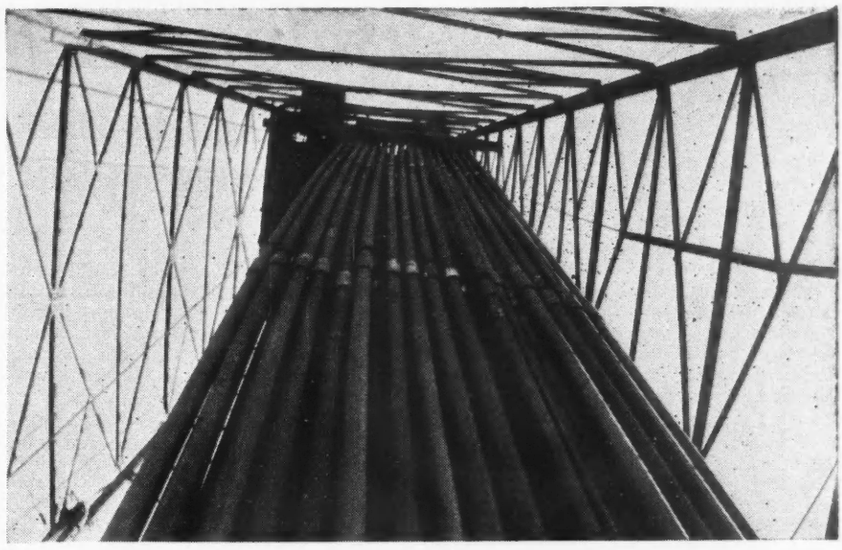
Last week a drill-stem test was made from 2980 to 3015 feet and showed a pressure of 330 pounds in five minutes. The test was made through two quarter-inch chokes. The hole was drilled to 8075 feet after coring salt water sands from 7723 to 7783 feet. After a fishing job at 8075 feet, the hole was plugged back to 2970 feet and sands showing gas were cored in the sidetracked hole from 2980 to 3015 feet. It has been definitely decided to complete as a gas producer.

Texas Crusaders Oil Company's Fee 1 at Magnet in Wharton County, was cored four feet deeper last week to 5566 feet. Six inches of oil sand was recovered from 5562 to 5566 feet. After setting screen the well flowed 19 barrels of fluid per hour, 75 percent salt water, through a quarter-inch choke. The test flowed for six hours and then went dead.

Cotton Lake Wildcat Important

One of the most important wildcats drilling in the Texas Gulf Coast is Salt Dome Oil Corporation's Lawrence 1-A at Cotton Lake, Chambers County, which was preparing to core for the Frio at 6509 feet at the end of the week and is reported running over 300 feet higher than wells drilled to the east. Several sands showing oil and salt water were encountered in Marginulina from 6456 to 6465 feet.

East of Cotton Lake field, R. W. Fair et al's Ben Dutton 1, A. B. J. Winfree Survey, was abandoned last week in salt water sand at 6407 feet. Top of the sand was logged at 6385 feet.



There's a first time for everything. The above gave the first opportunity to snap over 10,000 feet of drill pipe in a derrick on the Texas Gulf Coast. Shell Petroleum Corporation's discovery well at Hitchcock, drilled to 10,460 feet before it was plugged back to 5170 feet and completed last week as a producer.

Northeast of production at Cotton Lake, Glenn H. McCarthy completed Kilgore 6, J. Townsend Survey, making 18 barrels of pipe line oil per hour through a quarter-inch choke with a tubing pressure of 1600 pounds and a casing pressure of 2150 pounds.

Northeast of production at Turtle Bay field, Chambers County, Sun Oil Company's Chambers 3 was down to 6623 feet in salt water sand. Two feet of sand was cored which showed traces of oil and the bit went into salt water sand.

Gulf Oil Corporation made location for Acom 1 offsetting Pommer 1 at Anahuac. It is in H.&T.C. Section 45.

Humble Oil & Refining Company has three flank tests at Anahuac nearing completions. Boyt 3 on the northeast side was setting screen and liner at the end of the week at 7128 feet. White 18, north side of the field, was running tubing at 7132 feet, and White B-4 on the northwest side was drilling cement plugs at 7129 feet.

Stanolind Oil & Gas Company will drill J. Warren Minerals 1 at Hockley Dome in Harris County. It is 1800 feet from the east line and 2150 feet from the south line of H.&T.B. Section 1.

Amerada Petroleum Corporation and Stanolind Oil & Gas Company made location for Dopsaluf C-2 at Fairbanks in Harris County. It is 933 feet south of Dopsaluf 1 and 466 feet from the east line of lease in the W.C. R.R. Survey 2, Block 1.

Hastings, Brazoria County, was extended one location northeast last week when Humble Oil & Refining Company completed Brown 5, Wm. H. Henry Survey, flowing 28 barrels of pipe line oil per hour from Frio sands at 6081 feet. Flow was through a quarter-inch choke with a tubing and casing pressure of 900 pounds Top of the sand was found at 5999 feet. Also on the northeast side of Hastings, Humble Oil & Refining Company made a production test on Brown 7. The test made 28 barrels per hour. The hole was drilled to 6222 feet and was plugged back and 5¾-inch casing was cemented at 5997 feet.

In the northeasterly direction from production, Walter Gholdston was preparing to complete his second well at Hastings at the end of the week. Fee 2 was drilled to 6135 feet and was plugged back to 4637 feet where a whipstock was set. The sidetracked hole was carried down to 6088 feet and sand showing gas was encountered from 4889 to 5980 feet.

Stanolind Oil & Gas Company made good producers out of Ford 5 and Drake 6 at Hastings. Ford 5, A.C.H.&B. Section 1, made 500 barrels in 21 hours at 6080 feet. Drake 6 was completed at 6080 feet

TEXAS GULF COAST
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Stanolind, Sargl 1	11	6105
ANAHUAC—		
Gulf, Pommer 1	691	7127
BLUE RIDGE—		
Texas Gulf Prod. Co., Blakely 14..	*	6168
BOLING—		
Mackhank Oil Co., Farmer A-2....	635	4846
CLEVELAND—		
Gulf, Kirby C-5	*	5841
CONROE—		
Humble, Urech 1	480	5169
A. U. Morrison, McComb 4.....	554	5070
Strake, Keystone Mills 15	552	5066
COTTON LAKE—		
R. W. Fair et al, Ben Dutton 1...	*	6407
DICKINSON—		
Pan American Prod. Co., Craig 2..	1¼	8570
HASTINGS—		
Humble, Brown 5	672	6081
Stanolind, Drake 6	648	6080
Ford 5	576	6080
HIGH ISLAND—		
Stanolind, Cade 58	*	5904
HUMBLE—		
A. B. Marshall, Bender 1.....	*	2618
Cook & Polk, Crow 2	176	2381
MANVEL—		
Texas Co., Ellis 1	*	5738
NOME—		
Sun, Paggi 3	55	6052
SOUTH HOUSTON—		
Stanolind, Drilling District 11.....	336	4545
Drilling District 47	257	4773
TOMBALL—		
Humble, Tomball Townsite Unit 18, Well No. 1	480	5575
VAN VLECK—		
Skelly, Cobb B-12	334	7525
Good B-13	790	7493
CHAMBERS COUNTY—		
Sun, Acom 1, Seabreeze prospect, T&NO sur, sec 128	50	8190
GALVESTON COUNTY—		
Shell, Maco Stewart 1, Hitchcock prospect, J. Spillman sur	12	5130

*Failures; †Junked; ¶Million cu. ft. gas.

flowing 351 barrels of pipe line oil in 13 hours.

Showers & Moncrief's Hughey 1 on the northwest side of the field was flowing oil into pits at the end of the week. The hole was drilled to 6080 feet in sand topped at 5575 feet.

The northern portion of Amelia field, Jefferson County, was extended east last week when Stanolind Oil & Gas Company completed Sargl 1, H. Williams Survey, making 11 barrels of oil and 1,500,000 cubic feet of gas daily from 6105 feet.

Conroe field, Montgomery County, was extended 800 feet north when Humble Oil & Refining Company's Urech 1 made 20 barrels of pipe line oil per hour from the Cockfield formation at 5169 feet. Top of the sand was logged at 5168 feet.

J. K. Dorrance's Wings 1, in the northwest corner of Polk County, was preparing to make drill-stem test at 5170 feet after coring broken sand and shale with a slight showing of oil from 5156 to 5170 feet. During the past week the drill-stem test from 5070 to 5111 feet recovered one joint of mud with no shows of oil or gas.

On the northwest side of Dickinson field, Galveston County, Humble Oil & Refining Company's Boone 1 has missed the regular producing sand and was drilling in shale at 9132 feet at the end of the week.

In the Gillock area, southwest of Dickinson, Humble Oil & Refining Company's Maco Stewart A-12, W. K. Wilson Survey, Galveston County, was completed making 30 barrels of pipe line oil per hour through a quarter-inch choke with a tubing pressure of 950 pounds from 8602 feet.

Below 11,808 Feet

ABBEVILLE WILDCAT MAY SET NEW WORLD'S DEPTH RECORD

Lake Charles.—Continental Oil Company's Herbert 1, Abbeville prospect, Section 20-12s-3e, Vermillion Parish, was drilling in shale at 11,808 feet December 11. It was stated that the company would "continue to drill Hebert 1 until the hole runs out."

Drilling is being done in a sidetracked hole with three-inch drill pipe, and if no trouble is encountered the wildcat will be carried to an indefinite depth. The geological department will determine how far the well will go.

An electrical logging device will be run within the next several feet and then the crew will continue to attempt to drill on down below the 2¾-mile depth. It is generally believed that no if trouble is encountered the test will establish a new world record for deep drilling.

During the past week the crew cored for the 11,732-foot sand but was missed. It is presumed that due to heavy drilling mud in the hole this sand was missed. When this sand was originally encountered the wildcat blew out and lodged the drill pipe. The well was plugged back and was re-cored to the above sand. At 11,727 feet a soft shale formation was encountered which showed gas.

West of production at English Bayou field, Calcasieu Parish, Fohs Oil Company was preparing to complete Powers 3 in the Marginulina formation. Powers 3, Section 14-9s-8w, was drilled to 7062 feet and encountered the oil sand from 7033 to 7060 feet. Seven-inch casing has been set at the bottom of the hole and the casing will be perforated as soon as cement hardens. If the test is a commercial producer it will extend production west.

Union Sulphur Company's Kaufman 3 on the east side of English Bayou, which discovered a deeper sand some time ago, was abandoned after showing salt water at 7374 feet.

On the west side of Tepetate field, Acadia Parish, Continental Oil Company completed A. Young B-2 and O. Young 1, both in Section 29-7s-2w. A. Young B-2 made 316 barrels of 35 gravity oil daily through a 3/16-inch choke with a tubing pressure of 600 pounds and a casing pressure of 1050 pounds. Gas sand was logged at 8285 feet and oil sand was topped at 8306 feet. Five and three quarter-inch casing was cemented at 8316 feet, the bottom of the hole. O. Young 1 was completed at 8317 feet making 361 barrels of 39.6 gravity pipe line oil daily through a 5/32-inch choke. Tubing pressure was 2300 pounds; casing, 2050 pounds. Gas was logged at 8274 feet in O. Young 1 and the oil sand was tapped at 8306 feet.

Plan Three at Tepetate

Upon completing the above two wells the company made location for three additional tests: O. Young 1-A, and Homeseekers D-1 and D-2. O. Young A-1 is 990 feet south and 660 feet east of the northwest corner of Section 29-7s-2w. Homeseekers D-1 is 309 feet south and 708 feet west of NEc SE SW Section 29-7s-2w. Homeseekers D-2 is 972 feet south and 615 feet west of the NEc SE SW Section 29-7s-2w, Acadia Parish.

Northeast of Bosco field and on the Cankton prospect, St. Landry Parish, Superior Oil Producing Company's A. Savoie 1, Section 26-8s-3e, was coring in shale and sand at 9370 feet December 11. The crew has been coring almost continuously in Savoie 1 from 7900 feet to 9370 feet. Several of the Bosco sands have been found in the wildcat, but none of the formations carried a thick sector of sand. A core from 7940 to 7960 feet showed three feet of sand with an odor of oil, and from 7960 to 7975 feet sand and shale was cored which showed oil and salt water. A sand with an odor of oil was cored from 8360 to 8380 feet, but it showed salt water.

Shell Petroleum Corporation was preparing to complete Heyd 21 in a 6537-foot sand at Iowa, Jefferson Davis Parish. The crew topped a sand showing oil at 6562 feet, but encountered a broken formation at 6538 feet. A drill stem test

Here's to CHRISTMAS

SANTA is now quite a venerable institution, with the hoar of one thousand nine hundred and thirty-six years in his grizzly beard. But we're glad we don't handle the merchandise he totes, so we can be one NOT to say "Shop Early." And here's a thought: Men who work with equipment PELCO vends have pretty good old-line mutual insurance against well trouble at Christmas time—or any other time.

PELICAN

WELL TOOL & SUPPLY COMPANY

SHREVEPORT, LOUISIANA

PELCO

Lake Charles—Houma—Converse
New Iberia—Rodessa—Monroe—Cotton
Valley—Turnertown—Greggton—Houston

taken from 6557 to 6573 feet showed 12 barrels of oil, 18 barrels of sand, oil and mud, 12 joints of sand and also a 200-pound pressure through ⅝- and ¼-inch chokes in eight minutes. Seven-inch casing has been set at 6537 feet. A production test will be made on Heyd 21, Section 13-9s-7w, the coming week.

To Test New Sand

A new sand on the southwest side of Jennings field, Acadia Parish, will be tested by Superior Oil Producing Company the coming week. The company's Eunice Crowley 1, Section 42-9s-2w, was cored and drilled to 6448 feet and an electrical logging device was run. While attempting to run seven-inch casing it was lodged and the crew was forced to ream. Finally the casing was cemented at 5700 feet. Sands from 5420 to 5540 feet which showed 20 ohms resistivity on an electrical logging device, will be tested.

On the Mallard Bay prospect, Cameron Parish, Pure Oil Company's State Mallard Bay 1, projected 11,000-foot test, Section 22-13s-3w, was drilling in shale at 7370 feet at the close of the week. Two feet of brown sand cored from 6837 to 6841 feet had a slight odor of oil.

Mike Hogg's discovery well at Charenton is being worked over by Pan American Production Company. The operators made a drill stem test from 7200 to 7210 feet and the well showed 34 stands of oil, six stands of wash water and one joint of sand, along with a pressure of 100 pounds in seven minutes through two ¼-inch chokes. After making the drill stem test the hole was plugged back to 7150 feet. The well will be given a production test the coming week.

At Jeanerette field, St. Mary Parish, A. U. Morrison made location for Matilda Plantation 1 south of Herton Oil Company's State Bayou Teche 1 in Section 70-13s-9e. Herton Oil Company also made location for Banta 6, west of the company's Roane 4 in Section 40-13s-9e.

In Terrebonne Parish, Humble Oil & Refining Company's Ellender 1, Section 32-19s-19e, was coring in shale at 8767 feet December 11. A slight showing of gas was found from 8206 to 8236 feet.

Humble Oil & Refining Company abandoned Community 13 at Darrow, Ascension Parish, last week after drilling to 5672 feet and taking a series of drill stem tests around 4350 feet.

SOUTH LOUISIANA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSCO—		
Superior, Larcade 7 (wo)	160	8561
DARROW—		
Humble, Community 13	*	5672
ENGLISH BAYOU—		
Union Sulphur, Kaufman 2 (wo)	*	7374
GILLIS—		
Union Sulphur, Barbee 10	550	6711
JENNINGS—		
Louisiana Iron & Supply Co., Houssiere Latrielle 107 (wo)	80	1728
Geo. McClough, Heywood Fee 2 (wo)	*	2520
Port City Oil Co., Syndicate Fee 16 (wo)	15	2303
Stanolind, Houssiere Latrielle 6 (wo)	335	7534
ST. MARTINVILLE—		
Continental, Fee A-2	*	8134
SULPHUR—		
Union Sulphur, Fee 838	633	4536
TEPETATE—		
Continental, A. Young B-2	312	8318
O. Young 1	361	8317

*Failures; †Junked; ¶Million cu. ft. gas.

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Pressure Drop Halted

RODESSA LOUISIANA DRILLING WORK ALSO AT LOWER FIGURE

WEEKLY STAFF REPORT

Shreveport. — The drop in bottom hole pressures on the Louisiana side of the Rodessa field was further halted during the 31-day period ending November 27, according to a compilation of bottom-hole pressures on 95 wells made by engineers of the Rodessa Operators Committee There are over 325 wells on the Louisiana side of the field. For the period ending November 27 the average bottom-hole pressure was 1950 pounds, representing a drop of 59 pounds or an average drop of 1.9 pounds per day. This showed a halting of the drop as compared to the preceding periods starting last July 7.

A gas-oil ratio of 12,500 to 1 for oil wells and 25,000 to 1 for distillate wells was put into effect last September 15 by the Louisiana Conservation Commission in effort to halt gas waste in the field. A new allowable order is expected to be promulgated soon which will place allowables on 50 percent acreage and 50 percent production. Whether this will be promulgated at the time of the expected new gas-oil ratio for the field is not known. It had been expected that the new gas-oil ratio order would have been promulgated during the last week.

Drilling Drops

A number of active operations on the Louisiana side of Rodessa reached a record low ebb for the last 12 months during the week just closed when there were only 13 active drilling operations on that side of the field compared to 57 on the Cass County, Texas, side, giving the field a total of 70 drilling wells.

The most interesting of last week's locations was one made in Marion County, Texas, 6 miles southwest of nearest Cass County production by Arkansas-Louisiana Gas Company for W. S. Ford 1, located 466 feet south and east from northwest corner of a 413-acre tract in the Charles O. Grayson Survey. Rig is being moved in. This is almost midway between the southwest producing end of the field and Holcomb, Thomasson and others' (M. H. Overlees), Lizzie Henderson 1, R. Bennington Survey, Marion County, 13 miles southwest of production. The latter test last week was temporarily shut down at 4710 feet repairing rig. With elevation of 221 feet this test logged top of chalk at 1920 feet and top of the red beds was 3748 feet.

The Texas side of Rodessa continues to get the larger number of new locations although the northwest part of the Louisiana side in the direction of two outpost tests, one in Louisiana and one in Cass County, came in for several new tests last week.

One and one-half miles northwest of production on the Louisiana side J. Edward Jones' Maidie Sharp 1, SW NW SE 4-23n-16w, was flowing at the rate of 165 barrels in 24 hours through ¼-inch tubing choke with casing pressure 450 pounds and tubing pressure neutralized. Two miles southwest of this well and in the G. Crowder Survey, Cass County, Bay Oil Company continues to swab George Parker 1. Both of these tests are producing from the Gloyd horizon.

Besides the 57 drilling operations on the Texas side and exclusive of the week's new locations there were 8 other active locations on the Texas side of the field and 15 derricks and rigs. On the Louisiana side exclusive of the week's new locations there were 4 active locations and 2 rigs and derricks.

H. L. Hunt, Incorporated, may yet make a small pumper in I. N. Shelton 1, James Davenport Survey, Cass County, west outpost test, that showed salt water with a little oil when first tested in the Young horizon at 6051 feet and later showed water in the Dees. Recemented and drilled out to 6050 feet in Young it is swabbing oil and water. East Texas Petroleum Company's Belote 1, Charles Ames Survey, southwest outpost, after topping the Gloyd at 5856 feet developed a fishing job at 5876 feet.

R. W. Norton's Payne 1, SE SE 27-23n-16w, south of the Rodessa main fault, and designed as a 10,000-foot test, last week was drilling lime below 6040 feet.

Sligo Producer

The Petitt sand of basal Glen Rose, for several months productive of wet gas, last week accounted for its second oil well in the Sligo field, Bossier Parish, when United Gas Public Service Company's Skannal G-1, SE NE 22-17n-12w, was completed in this horizon at total depth of 5170 feet in 20 feet of formation, flowing 20 barrels of oil and wash water per hour through ¼-inch tubing choke. The well completed Thursday had not thoroughly cleaned itself but there was no salt water.

This well is exactly one mile northwest of the same company's Skannal F-1 completed several weeks ago as the first oil well in the Petitt horizon at Sligo and which is now averaging 100 barrels daily. Both wells are on the southwest flank of this structure.

Producers Oil & Gas Company which drilled the Petitt sand discovery well, Petitt 1, Section 7-17n-11w, is expected to announce several locations immediately for tests to this horizon.

With five wells at Cotton Valley Webster Parish, which missed production at top of the Travis Peak found at the 5500-foot horizon by Ohio Oil Company's Holloway 6, Section 23-21n-10w, drilling below 7000 feet, Woodley Petroleum Company's L. C. Cox 1, SW NE 22-21n-10w, a mile northwest of the Travis Peak discovery well, gave indications of being a gas-distillate or oil producer at this level when it logged top of the Travis Peak producing horizon at 5537 to 5544 feet, which with difference in elevations was estimated at 5 feet lower than Halloway 6 and had 9⅝-inch casing cemented at 5524 feet.

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A possibility of another producing horizon at 4565 to 4900 feet in the Sugar Creek gas field which has wet gas production from the Glen Rose below anhydrite and from top of the Travis Peak, was eliminated last week when Sugar Creek Syndicate's Taylor 1, Section 5-19n-5w, after plugging back to 5100 feet from 5927 feet, tested 13 thribbles of salt water in 20 minutes in a drill-stem test from 4565 to 4900 feet and is being abandoned.

Possibility of commercial gas production in the lower Glen Rose lime was seen last week in DeSoto Oil & Gas Company's (R. O. Roy) Dunn and Olsen 1, N½ NW 15-16n-10w, Bienville Parish, a wildcat near Lake Bisteneau, after logging 36 feet of formation from 5200 to 5236 feet, showed an estimated 5 million cubic feet of gas daily when drill-stem test was made at that level with ⅜-inch choke on top and ½-inch choke on bottom. Seven-inch casing will be cemented immediately. Elevation is 259 feet.

Blowing out suddenly while tubing was being run in the hole at 4170 feet, Lee Whitehurst and associates' Whitney Corporation 1, center NW NE 8-9n-13w, Sabine Parish, in the shallow Converse field, made wet gas for several hours at an estimated rate of 40 million cubic feet daily with some distillate and a little oil, before being shut in. Pressure was 1140 pounds. Total depth is 5503 feet in Glen Rose formation. At the bottom of the hole 27 feet of saturation was logged.

With elevation of 289.9 feet this test logged top of the Nacatosh at 1450 feet, top of the Saratoga chalk at 1495 feet, base of Annona chalk at 2068 feet, top of the Austin chalk at 2830 feet, logged Fredericksburg from 3015 to 3070 feet, topped first anhydrite stringer at 4603 feet and logged base of massive anhydrite at 5349 feet.

Sherrouse & Snyder are arranging to abandon Kimble 1, NE SE SW 36-12n-8e, Franklin Parish at 3010 feet; elevation is 65 feet. Another test on this 20,000-acre block probably will be drilled at once. This test logged base of the Jackson at 684 feet, top of the Cane River at 2450 feet, and top of the Wilcox at 2825 feet. An electrical tester was run before arrangements were started to abandon.

NORTH LOUISIANA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CLAIBORNE PARISH (Sugar Creek)—		
Sugar Creek Synd., Darrett 2, 31-20n-5w, (old td 8616)	¶20	5703
Taylor 1, 5-19n-5w	sw	5927
CADDO PARISH (Pine Island)—		
C. C. Crews et al, Ponder 1, 11-20n-15w	50	2203
DE SOTO PARISH—		
Kamon et al, Roscoe Est. 1, 14-12n-13w	*	1840
Jal Drilling Co., Jenkins 1, 35-13n-12w	15	2460
SABINE PARISH (Converse)—		
A. L. Braden et al, Henderson 1, 29-9n-13w	750	1680
CADDO PARISH (Rodessa)—		
J. Edward Jones, Maidie Sharp 1, 4-23n-16w	165	6035
Standard Oil Co. of La., Farmer 1, 7-23n-15w	600	6088
CASS COUNTY (Rodessa)—		
American-Liberty Oil Co., Bauguss B-2, J. H. Rives sur	1000	6022
Magnolia Pet. Co., Mada Green 1, Jas. Davenport sur	1000	6033
Magnolia Pet. Co., George 14, Jno. Collum sur	1000	6125
Wall & McLeod 1, Alex Archer sur	1200	6100
Wall & McLeod 2, Alex Archer sur	1200	6065
R. W. Norton, Moore 3, William R. Meyers sur	1200	5990
Phillips Pet. Co., Farrier 1, William R. Meyers sur	1000	6050
Texas Company, J. B. McLeod 1, W. A. Elliott sur	1000	6100
United Gas Pub. Serv. Co., Jones Unit 7, Benj. J. Murray sur.	1200	6055

*Failures; †Junked; ¶Million cu. ft. gas.

45 GRAVITY HIT
Glen Rose oil in Miller County wildcat of Lenz

El Dorado, Ark.—Evidence of a commercial well in the Glen Rose below the anhydrite was given last week by C. V. Lenz's Dale 7, located 550 feet west of center of Section 24-15-26, Miller County, Arkansas, which was swabbing considerable oil of 45 gravity from total depth of 4216 feet. Seven-inch casing was cemented at 4208 feet and the producing horizon was logged from 4210 to 4216 feet. This test logged the base of massive anhydrite at 3970 feet. The well may be standardized, but it

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OK SLO-SET CEMENT is a true Portland Cement and contains no admixtures or adulterants.

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LABORATORY TESTS ON OK SLO-SET CEMENT

SETTING TIME TESTS

VICAT NEEDLE

Temperature	Mixing Water	Initial Set
70° F.	40%	8 hrs. 30 mins.
130° F.	40%	2 hrs. 35 mins.
194° F.	40%	3 hrs. 15 mins.

STRENGTH TESTS

POUNDS PER SQ. INCH

Temperature	Mixing Water	1 DAY		3 DAYS		7 DAYS	
		Tensile	Compressive	Tensile	Compressive	Tensile	Compressive
70° F.	40%	170	1,350	325	3,300	460	5,160
130° F.	40%	350	4,030	435	6,360	550	6,800
194° F.	40%	375	4,000	400	4,100	425	4,200

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has been heading intermittently ahead of the swab.

Lenz is the discoverer of the shallow Garland City field, having drilled the discovery well of that field in the same section with the present well. He failed to find production in other tests in that section, and the field proper was found two to three miles southwest around Section 35-15-26.

Benedum & Trees Oil Company's Groves 3, Section 10-14-20, Nevada County, Troy district, offsetting to the south the same company's Groves 1, in the same section, is pumping approximately 300 barrels of very heavy oil daily from the Nacatosh at 1243 feet and is waiting on 24-hour gauge. The company's Groves 1, pumping from 2190 feet, is averaging about 125 barrels of net oil daily.

ARKANSAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
COLUMBIA COUNTY—		
King Oil Corp., Fullenwider & Kitchen 2, 13-17-22	†	3825
NEVADA COUNTY—		
Benedum & Trees Oil Co., Groves 3, 10-14-20	175	1243

*Failures; †Junked; ¶Million cu. ft. gas.

RUNNING HIGH
Mississippi test samples being preserved

Hattiesburg, Miss.—An abnormally high structural position has been recorded by the Lamar County wildcat of Sun Oil Company and Wanette Oil Company on the Scanlan & Semmes tract, C SW NE 28-4n-15w, about 16 miles west of Hattiesburg, in drilling to 1990 feet, with an elevation of 320 feet. This prospect is slated to drill to 8500 feet, if necessary to test the lower Cretaceous zone. It is one mile south of a 3520-foot test drilled by Wanette Oil Company, a Dallas concern controlled by E. B. Germany, and a correlation of the shallow geological markers logged by the two tests reveals an unusually high structural position for the projected deep test. The partnership owns lease on about 35,000 acres in the area, and also acquired considerable mineral deeds. Formation samples are being preserved and when the test is completed a detailed report will be available to all interested companies along with samples.

New Colorado Field

FIRST TERTIARY PRODUCTION IN ROCKY MOUNTAIN REGION

ROCKY MOUNTAIN FIELDS — WEEKLY STAFF REPORT

Casper, Wyo.—Official gauge on the Mountain Fuel Supply Company's Carl Allen 1, NE SW SE 32-12n-97w, on the Powder Wash structure, Moffat County, northwestern Colorado, showed 47½ barrels per hour. Flow is coming from the lower Wasatch series at 5,012-32 feet and marks the first prolific production to be developed from beds of the Tertiary period in the Rocky Mountain area.

The oil flow in the well is accompanied by daily flow of gas rated at 5,000,000 cubic feet and marks the opening of a new light oil field for Colorado. Gravity of the crude is shown at 40° Baume.

Finding of the oil production in a region heretofore producing only gas is expected to stimulate considerable drill exploration of nearby structures including the Sugar Loaf Butte dome and Vermillion Creek Anticline. Both structures were drilled early in 1933 but were carried only to the upper Wasatch series. Indications now point to the fact that the structures will be redrilled to the lower series for another test.

Mountain Fuel Supply Company is rigging up Hal Stewart 1, CSW SW 32-12n-97w, in the center of the 40-acre lease offsetting the discovery well to the southeast.

Mountain Fuel Supply Company's 8,500,000 cubic foot gasser brought in on the Clay Basin gas structure in Daggett County, northeastern Utah, extended that field a half-mile to the northwest. Several gas wells have been completed on this field but to date no oil production has been made here. The new well, State 1, NW SE SW 16-3n-24e, is producing from the Dakota sand at 5,740-5,877 feet. Discovery well for the field was the Producers' Refiners Corporation's Government 2, SW NW 23-3n-34e, which made 3,276,000 cubic feet initial from the Frontier sands at 5,373-75 feet and at 5,395-5,412 feet. Record production in the field was made by Mountain Fuel Supply Company's Murphy 2, NE NE 21-3n-34e, which made 32,000,000 cubic feet of gas daily in the Dakota at 5,727-5,808 feet after being plugged back from the Sundance in which water was encountered.

Mountain Fuel Supply Company has another Tri-State well near completion this week. Adam Cooper 1, CNW SE 15-16n-104w, on the South Baxter Basin field, Sweetwater County, southwestern Wyoming is coring in the Frontier sands at 2183 feet with some gas shows.

In the Clay Basin field, the company is rigging up rotary for Lauzer 1, CNL NW NW 27-3n-24e.

Mountain Fuel Supply Company's Georgia Kuykendall 1, NE NE SE 22-12n-100w, in the Hiawatha field, Moffat County, Colorado, is cementing back to 2,537 feet.

Lance Creek

Ohio Oil Company is running 11-inch wall scrapper in an effort to increase production in Agnes Rohlff 4, CSW NE 32-36n-65w, in the Lance Creek field, Niobrara County, eastern Wyoming, which completed for 40 barrels initial last week. This company is waiting on rig for Leo-OPC-16 5, NW NW SW 35-36n-65w, which, if a successful producer, will extend the limits of the Lance Creek field another three quarters of a mile to the east. Lamb 9, CSE NE 5-35n-65w, is rigging up rotary.

Prospects of a good completion at Lance Creek are seen in Argo Oil Company's Elliott 8, NW SE 5-35n-65w, which showed a flow of 55 to 60 barrels of oil per hour through drill stem with tester seated at 4,061 feet on top of the basal Sundance in which the hole is bottomed at 4,071 feet.

Two of Continental Oil Company's Lance Creek wells are nearing completion. Schuricht 2-B, plugged back from 4,068 feet, where it encountered water, to 4,000 feet and is swabbing in and testing through 2-inch tubing run to 3,998 feet. Dielman 2-A, NW NE NE 7-35n-65w, is waiting on cement to set around 7-inch production casing set at 3,992 feet in the top of the basal Sundance topped at 3,990 feet. Hole bottoms in the basal Sundance at 4,025 feet. Schuricht 2-A, CNW SW 5-35n-65w, is waiting on rotary.

J. M. Huber Corporation's Joss 2, NE NE SW 6-35n-65w, Lance Creek,

is drilling at 3,355 feet in shale formations.

A. B. Cobb and Holly Development Corporation's Nat Novick 1, NE SE SW 6-35n-65w, Lance Creek, is cementing off lost tools to drill by at 3,440 feet. Total depth is at 3,578 feet.

Muskrat Gas Field

Sinclair-Wyoming Oil Company's Muskrat 2-C, NE SW SW 1-33n-92w, drilled as a deep test of underlying formations in the Muskrat gas field, Fremont County, west central Wyoming, is still fishing for bailer at 7,200 feet. The company has run 2,000 gallons of acid and will test production of the Embar lime at 7,268-93 feet as soon as bailer is recovered. Oil rose 3,000 feet after drilling plug but completion was delayed by the loss of the bailer while cleaning out.

Northern Montana

After a spasmodic increase in activity last week in the Cut Bank and Kevin-Sunburst fields in northern Montana in which Cut Bank operators completed 6 wells and Kevin Sunburst 5, the fields slowed to a near standstill again this week as cold weather hampered drilling operations.

One new location was released in the Cut Bank field this week. Montana-Dakota Utilities Company's Government 1, CNE NE 15-34-6w, has rig up. There were no completions in the field this week.

MOUNTAIN STATES

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
GLACIER COUNTY (Cut Bank Field)—		
Montana Power Gas Co., Schuette Unit 1, se se nw 5-34-5w	¶8¼	2775
Simero 1, cne se 6-33-5w	247	2810
R. C. Tarrant, Getty 7, csw nw sw 2-34-6w	90	2855
Texas Co., Tribal 6-122, ne se 6-32-5w	50	2915
Tribal 7-122, lot 9, 5-32-5w	700	2871
A. E. Wilkins, Allotted 2-127, cse ne 1-32-6w	160	3022
TOOLE COUNTY (Kevin Sunburst Field)—		
Agen & Goedertz, State 3, ne½ sw ne 16-35-3w	20	1772
B. A. S. Aronow, Government Permit 5-051955, se nw nw 21-35-3w	8	1839
A. E. Crumley, Shaw 11, se nw ne 35-36-2w	30	1587
Engleking & Pfabe, Hurley 1, sw ne nw 8-34-2w	12	1453
Frazer & Smith, Van Note 1, w sw nw 30-35-2w	12	1556
WYOMING		
NIOBRARA COUNTY (Lance Creek Field)—		
Ohio Oil Co., Carrie Putnam 6, cnw nw 4-35n-65w	799	4015
Agnes Rohlff 4, csw ne 32-36n-65w	40	3964
Adams-Louisiana Co., A. L. Spaugh, cnw ne 18-35n-65w	*	4615
CARBON COUNTY (Rock River Field)—		
Ohio Oil Co., Harrison Cooper 11, ne sw sw 35-20s-78w	1000	3210
WESTON COUNTY (Osage Field)—		
Chas. Stough, 5, cse nw 4-46n-63w.	7	281
Al Jones 14, cnw sw ne 21-46n-63w	20	475
R. L. Rose, 11, csl sw se 8-46n-63w	5	420

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Forced

TWO TESTS FIND NEW POOLS IN LOS ANGELES BASIN

WEEKLY STAFF REPORT

Los Angeles.—Recent completion of two good wells, proving two new fields in Los Angeles Basin, will bring about the drilling of at least eight or 10 new wells soon, and has revived interest in Southern California, where much drilling without material result in the past two or three years has taken place.

Completion by Richfield Oil Company of El Segundo 1, Section 18-3S-14W, in the general El Segundo area where Republic Petroleum Company has two small wells on production, will bring about the starting of at least seven wells in the next few weeks. The well started flowing December 7 at a rate of 2800 barrels of 28.6 gravity, with the bottom of the hole at 7435 feet. Seven inch pipe had been cemented at 7322 feet. Pressure on the casing is 720 pounds, on the tubing, 120 pounds. Flow is through 1½ inch bean, and the gas production is 1,400,000 cubic feet. During a 15-hour gauge production was at the rate of 2640 barrels. The cut was about 6 per cent, but the flow is cleaning up.

The operators holding leases nearby have mutually agreed to drill one well to each ten acres. Companies holding leases where new wells will be drilled include Richfield Oil Company, Caminol Oil Company, Republic Petroleum Company, The Texas Company and Ohio Oil Company. Others hold fairly favorably located leases, but they do not plan new wells for the present.

Terminal Test Successful

The other well is General Petroleum Corporation's Terminal 1, Section 4-5S-13W, in the Wilmington area, completed December 6. With plug at 3468 feet, the test made 1389 barrels of 19.6 gravity oil cutting less than 3 per cent, which is considered pipe line oil. The flow is through half-inch bean with pressures of 300 pounds on the tubing and 490 pounds on the casing.

This new Wilmington field well was drilled to 6814 feet, and stopped in the schist, having passed up several oil sands. Plug was placed at 3648 feet and 6⅝-inch combination string was landed top of the plug and cemented through perforations at 3122 feet. The string included 526 feet of perforated. General Petroleum Corporation is drilling one other well which is expected to produce from the zone tapped by Terminal 1.

The new Wilmington discovery well is very close to the harbor's edge, and it is barely possible some of the area on which is known as Terminal Island will prove productive. Practically all adjacent land is held under lease, and it is expected a number of new wells will be started after the first of the year. The large Ford Motor Company assembly plant is located less than half a mile to the east, and it is possible one or more wells will be drilled on that property.

New High Gravity Sand

Standard Oil Company's K. C. 11-1, wildcat in Section 19-29s-26e, 11 miles east of Bakersfield, cored into an oil zone from 7742-7807 feet including about 38 feet of sand saturated with high gravity oil. With the discovery of an entirely new oil accumulation, this well assumed overnight the rank of the state's most important well. The hole is being reamed to cement 9⅝-inch casing at 7740 feet. Located about seven miles north of the Ten Section oil field, this structure was discovered

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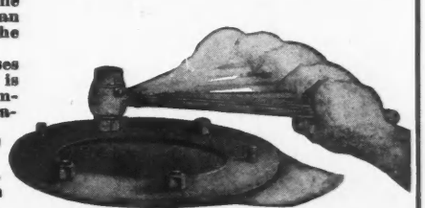

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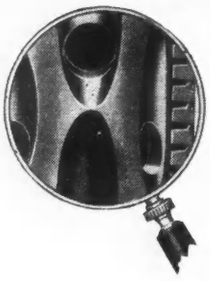
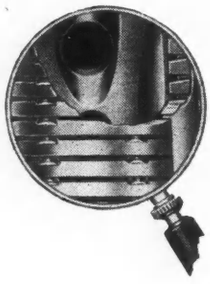


CUSHIONED FLOW



THE LAYNE

MILLED GROOVE SCREEN

In the Milled Groove Screen the fluid is forced through the gauge openings between the wires to the groove, thence to the pipe perforation.

By maintaining this idividuality of each opening, the pressure more quickly cleans the screen, and is distributed over the entire screen, thereby eliminating the cutting effect directly over the drilled hole.

For longer freedom from screen trouble, install Layne Milled Groove Screen.

LAYNE & BOWLER CO.

HOUSTON, TEXAS

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and the first well drilled as the result of extensive geophysical work.

Hall-Baker Company's Tejon 1-10, wildcat in Section 12-10n-19w, 30 miles south of Bakersfield, is being cored ahead at 1973 feet in oil sand. Location is roughly a quarter mile southeast from Reserve Oil & Gas Company's Tejon 1 which was drilled to 3708 feet, redrilled to 2694 feet, and completed June 18, 1935, pumping 50 barrels a day of 16 gravity oil with a cut of 50 percent. Location is about a half mile south and three miles east from Reserve Oil & Gas Company's Ritchie 33-1 and Tejon 33-2. Top of the Santa Margarita formation (upper Miocene) was cored at 1165 feet.

General Petroleum Corporation's Arvin 1, wildcat in Section 26-31s-29e, 15 miles southeast of Bakersfield, cored the top of the granite at 7457 feet and was bottomed at 7462 feet. The 8⅝-inch water string is standing cemented at 6570 feet. Formations from 6570 feet to 7457 feet consist principally of shale, with streaks of gray sand giving light cuts. Formation tests made at frequent intervals have recovered varying quantities of oil and gas, but no water.

Seaboard Oil Corporation has staked the location for a new wildcat, Security 1, in Section 16-23s-26e. This falls about eight miles southwest from the little, erratic Terra Bella oil field discovered in 1930, and roughly 40 miles north of Bakersfield.

Running Liner to Complete

On Gato Ridge, 15 miles southeast of Santa Maria, Barnsdall Oil Company's Tognazzini 2 was bottomed at 2500 feet and 8⅝-inch liner is being run to complete the well. Location is 450 feet southeast from the discovery well, Barnsdall Oil Company's Tognazzini 1, which was drilled to 6510 feet, plugged back to 2510 feet and completed June 30, 1931 pumping 1098 barrels a day of 15.5 gravity oil cutting 10 percent. In Tognazzini 2 the 10¾-inch water string is cemented at 1800 feet. The structure here is a curved anticline,

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BELRIDGE—		
Belridge Oil Co., No. 1-5	2100	8490
FRUITVALE—		
Miami Oil Co. No. 1	200	4070
MIDWAY-SUNSET—		
No. American Oil Cons. Co. No. 4	150	4051
Union Oil Co., Williams 2	440	2000
Safeway Oil Co., Mit Diablo 1	*	3680
MOUNTAIN VIEW—		
Allied Pet. Co., Allied 20	40	5456
Mohawk Pet. Co., Clendennen 8	140	6035
MOUNT POSO—		
Pet. Sec. Co., Murdock 2	120	1670
EL CAPITAN—		
Shell, Covarubias 1-16	1040	2487
VENTURA AVENUE—		
Shell, Taylor 88	1140	7462
ALAMEDA COUNTY—		
Seaboard Oil Corp., Johnson 1	*	5925
HUNTINGTON BEACH—		
Metro Oil Co., Golden Dome 1	240	4010
MONTEBELLO—		
Standard, Baldwin 90	50	3100
REDONDO—		
Southwest Pet. Co., No. 1	35	3605
SANTA FE SPRINGS—		
Union, Alexander 34	50	4490
Alexander 36	150	5199
TORRANCE—		
Dearborn Oil Co., Flint 1	400	4556

*Failures; †Junked; ¶Million cu. ft. gas.

and production is obtained from a zone of fracturing in the hard, cherty shales of the Monterey formation (Miocene). The fractures caused loss of circulation in each of these wells, necessitating the use of large quantities of mud preparations before penetration of the oil zone could be completed.

Torrance Redrilling Planned

Dearborn Oil Company's Flint 1, located at the south edge of Torrance field and 11 miles west of Long Beach, was completed flowing to the sump November 30 at the estimated rate of 600 barrels a day. Production was turned to the tanks December 1, and on the first 14 hour gauge the test produced at the rate of 525 barrels a day of 28 gravity oil, with irregular cuts of mud and drilling water. Present production is 265 barrels a day of 27.9 gravity oil cutting 16 percent. Well is being agitated with a pump and flowing through a half-inch choke, with tubing and casing pressures of 125 pounds and 650 pounds, respectively. Gas production is 125,000 cubic feet. Depth is 4556 feet, with 1560 feet of 4¾-inch combination liner, including 256 feet perforated, landed at 4556 feet and cemented through perforations at 4300 feet. Well was originally drilled to 3730 feet, produced, and finally was abandoned by Standard Oil Company, and only recently redrilled and cored ahead from 3194 feet. This well is the best completed in Torrance in several years. As a result, at least six abandoned wells on adjoining property on all four sides will be redrilled and deepened immediately.

Superior Oil Company's Inglewood Extension 1, wildcat near Loyola University in Section 25-2s-15w, is being cored ahead at 9091 feet in hard black Miocene shale. The nodular shale, which is usually roughly 200 feet thick and which overlies the basal conglomerate zone, has not yet been reached. The basement schist should be expected, therefore, at not less than 9350 feet. It is interesting to note that this test is located about 1¼ miles east of the nearest wells in the Del Rey Hills area of the Playa del Rey oil field, in which the top of the schist was cored at about 6700 feet.

Wildcat Flows Water

Signal Finance Corporation's Woods 1, wildcat in Section 10-3s-14w, 10 miles south and west of Los Angeles, started flowing muddy water after being swabbed to 400 feet. Depth is 9326 feet in conglomerate, with 6⅝-inch water string cemented at 7128 feet. The 2½-inch tubing was hung at 4000 feet, and swabbing commenced for a test of the zone immediately below the shoe.

At the south edge of the Wilmington field, six miles west of Long Beach, General Petroleum Corporation's Patton 1, was tested and the 13⅜-inch water shut-off at 2495 feet was approved. Depth was 2674 feet in shale with streaks of oil sand. Prior to setting the casing the hole was bridged to 2495 feet. The first shut-off test could not be completed, due to sand heaving up inside the casing. The hole was then cleaned out to 2505 feet and a 50-foot liner, including 30 feet perforated, was landed at 2505 feet to prevent further heaving of sand during the test. The liner is now removed and hole is being cored ahead to about 2839 feet.

EASTERN FIELDS

WEEKLY STAFF REPORT

Completions

KENTUCKY

Company, Well and Location	Init. Prod. Bbls.	Depth
OHIO COUNTY—		
Petroleum Exploration Co., Rommie-Hazel Graham	13	35
Elvis Dehart, O'Dell Heirs 2	*	....
O'Dell Heirs 3	50	....
Kentucky Nat. Gas Co., Alex Whitehouse 2	30	....
Alex Whitehouse 3	*	....
Nannie Rodgers 24	10	....
Cumberland Petroleum Co., Guy Richards 11	*	....
C. Petty 3	*	....
Fkis & Co., Doc Miler 2	*	....
Cane Run Petroleum Co., A. F. Bellamy 13	30	....
Lowman & Co., Guy Richards 3	*	....

OHIO

ATHENS COUNTY—		
A. D. Townsend & Co., J. H. Hartley 2	¶	1772
BELMONT COUNTY—		
Cox & Allwine, Cox M. J. Purdy 1	¶	1739
CLINTON COUNTY—		
Ohio Oil Phil Kleinekoste 1	*	1118
Frame 2	75	1117
COSHOCTON COUNTY—		
Preston Oil Co., A. Underwood 1	¶	3131
FAIRFIELD COUNTY—		
City Natural Gas, D. E. Bauer 2	4	1960
Pure Oil Co., Plumb Property 3	45	3232
J. D. Moorehead, Hazlette 2	25	3032
GUERNSEY COUNTY—		
Ferguson McCullough, W. S. Sheppard 1	¶	1585
George Jewell & Co., Chas. C. Tample 1	¶	1276
George Kernodle, T. A. Blount 1	¶	1117
HOLMES COUNTY—		
Ohio FG Co., Steve S. Miller 1	¶	4120
Bell Bros., Roy N. Conrad 1	*	805
JEFFERSON COUNTY—		
C. S. Kelley & Co., Ella S. Baxter 14	2	1275
KNOX COUNTY—		
Ohio FG Co., H. C. Twilling 1	*	3002
Upham Gas Co., Howard Sherer 1	*	2675
Knox Exploration, C. H. Simmons 1	40	3234
Ohio FG Co., Lenard Stricker 1	¶	....
Palmer Beal 1	*	....
LICKING COUNTY—		
Ruthledge Mossholder, Wm. Teagarden 4	7	629
Wm. Teagarden 5	6	723
Hazlett & Co., J. D. Marshead 2	22	....
Ira Hazlett & Co., S. M. Guthridge 1	85	3108
Clay Bros., George Boyd 3	¶	2987
Penn Construction, W. M. Hillaman 2	¶	890
LOGAN COUNTY—		
Puntsville Oil & Gas, Buckingham 1	¶	1498
LORAIN COUNTY—		
Ohio Oil, A. J. Schaefer 1	¶	2329
Ohio FG Co., Charles Schultz 1	¶	....
MEDINA COUNTY—		
Ohio Oil, L. R. Tressman 1	¶	3400
MONROE COUNTY—		
Hines Bros., George Hines 9	5	710
Hicks Oil Co., A. Slack 5	¶	1524
Harry Binegar, L. C. Moore 6	*	1967
Stewart & Elliott, James H. Heslop 14	¶	500
MUSKINGUM COUNTY—		
Ohio FG Co., W. L. Neal 1	¶	3987
NOBLE COUNTY—		
Barnesville Dev. Co., C. E. English 2	¶	1872
L. A. Patton, Mary Shilling 11	3	974
PERRY COUNTY—		
McClay Bros., Boyd 3	¶	....
Ohio FG Co., Burl Cotteran 1	*	3007
SENECA COUNTY—		
J. J. Werling & Co., J. H. Murphy & Xon 1	*	....
Homer Zimmerman, F. W. Keiner 1	¶	....
STARK COUNTY—		
East Ohio Gas Co., Rudy 1	¶	4255
SUMMITT COUNTY—		
East Ohio Gas Co., A. & M. Wise 2	¶	4055
TUSCARAWAS COUNTY—		
Ohio FG Co., G. Barthlome 1	¶	2135
Frank Lyons, Katherine Belden 1	¶	4289
Ohio FG Co., B. J. Crowerths 1	*	5426
WASHINGTON COUNTY—		
David Ripley, Lily Ripley 44	250	....
Henry Oil & Gas Co., D. B. Mullinex 2	*	1365
WAYNE COUNTY—		
Hazlette, Sam Nussbaum 1	*	4002
Ohio FG Co., Walter Dodez 1	*	4002

WEST VIRGINIA

CABELL COUNTY—		
DeJarnette, DeJarnette 2	¶	1426
Lusher & Lusher, Floyd Adkins 1	¶	3392
United FG Co., Edward D. Meadows 4670	¶	3157
CALHOUN COUNTY—		
McIntosh & Co., Lloyd Yeak 1	¶	2650
Barker & Fowler, Cora C. Stump 1	¶	1925
GILMER COUNTY—		
West Va. Util., J. T. Gerwig 3	¶	1777
KANAWHA COUNTY—		
W. Va. Gas Corp., Cambell & McChatic 1	¶	3900
Columbian Carbon, E. Copenhaven 1	¶	4833
United FG Co., H. C. Walker 4693	¶	....
LEWIS COUNTY—		
McCall Driling Co., Rinehart 1	*	....
LOGAN COUNTY—		
Boone Co., Cole Boon Coal 10	¶	....
MARION COUNTY—		
Carnegie Natural Gas Co., Hibbs 1	¶	....
MARSHALL COUNTY—		
G. B. & A. C. Patterson, Patterson 1	¶	....
RITCHIE COUNTY—		
Pittsburg & W. Va. Co., Garrison 6901	¶	....
Cario Oil Co., Bogger Heirs 1	¶	....
ROANE COUNTY—		
L. C. Young & Co., A. Kee 3	¶	....
WASHINGTON COUNTY—		
United Fuel Gas Co., Mohler Lumber Co. 4617	¶	....

*Failures; †Junked; ¶Million cu. ft. gas.

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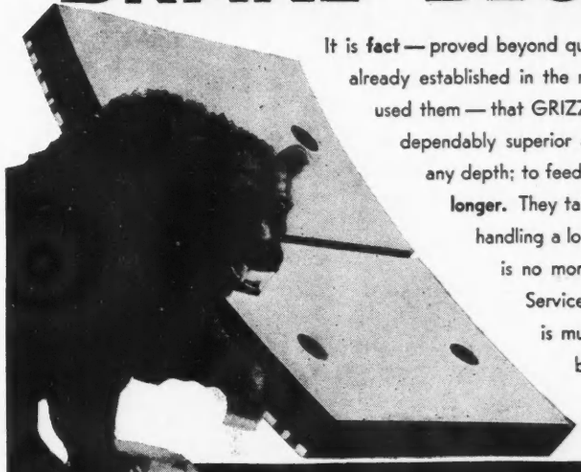
SAFELY
..at any depth
GRIZZLY
FULL-MOULDED
BRAKE BLOCKS



It is **fact** — proved beyond question or argument — and already established in the minds of drillers who have used them — that GRIZZLY BRAKE BLOCKS have dependably superior ability to hold the load at any depth; to feed off **smoother**, and to wear **longer**. They take a lot of the grief out of handling a long, heavy string. First cost is no more than other good linings. Service cost, due to longer wear, is much less. Distributors listed below will give you prices and any desired information.

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23 Wells Planned

MICHIGAN ACTIVITY CENTERS AROUND McCLANAHAN TEST

WEEKLY STAFF REPORT

Mt. Pleasant, Mich.—Twenty-three new starts this week pushed drilling operations in Michigan to 729 for an all-time state record as interest centered on wildcat tests in Arenac and Montcalm Counties.

Daily Crude Oil Company's Weatherby 1, Section 20-12n-9w, Winfield township, Montcalm County, treated with 1000 gallons of acid in Monroe lime, but could not be immediately tested due to a fishing job for the swab. However, flowing between 5-3/16-inch casing and tubing the test made approximately 96 barrels over a two-day period. Prior to acidization test flowed and swabbed average of 23 barrels over four day period along with an estimated 250,000 cubic feet of gas. The hole was bottomed at 3324 feet.

McClanahan Oil Company's Mee 1, Section 11, 20n-4e, Clayton township, Arenac County, logged Dundee top at 2463 feet (also reported at 2467 feet) and when drilled to 2531 feet did not have what appeared to be a commercial pay.

The test appeared to have missed altogether the first pay logged on McClanahan Oil Company's Seignious 1, Section 3-20n-4e,, discovery well in Clayton township. Seignious 1 topped lime at 2455 feet and flowed 10 barrels per hour from 2470 feet, increasing to 38 barrels an hour when 30 feet in lime. It was bottomed at 2506 feet. The discovery well is now averaging between 900 and 1000 barrels daily.

Unless a lower commercial pay is picked up on Mee test, which is approximately 1½ miles due southeast of the discovery well, part of the 16-well drilling play precipitated may be cooled. Most operators have played area to the southeast with royalty selling at $250 royalty per acre top.

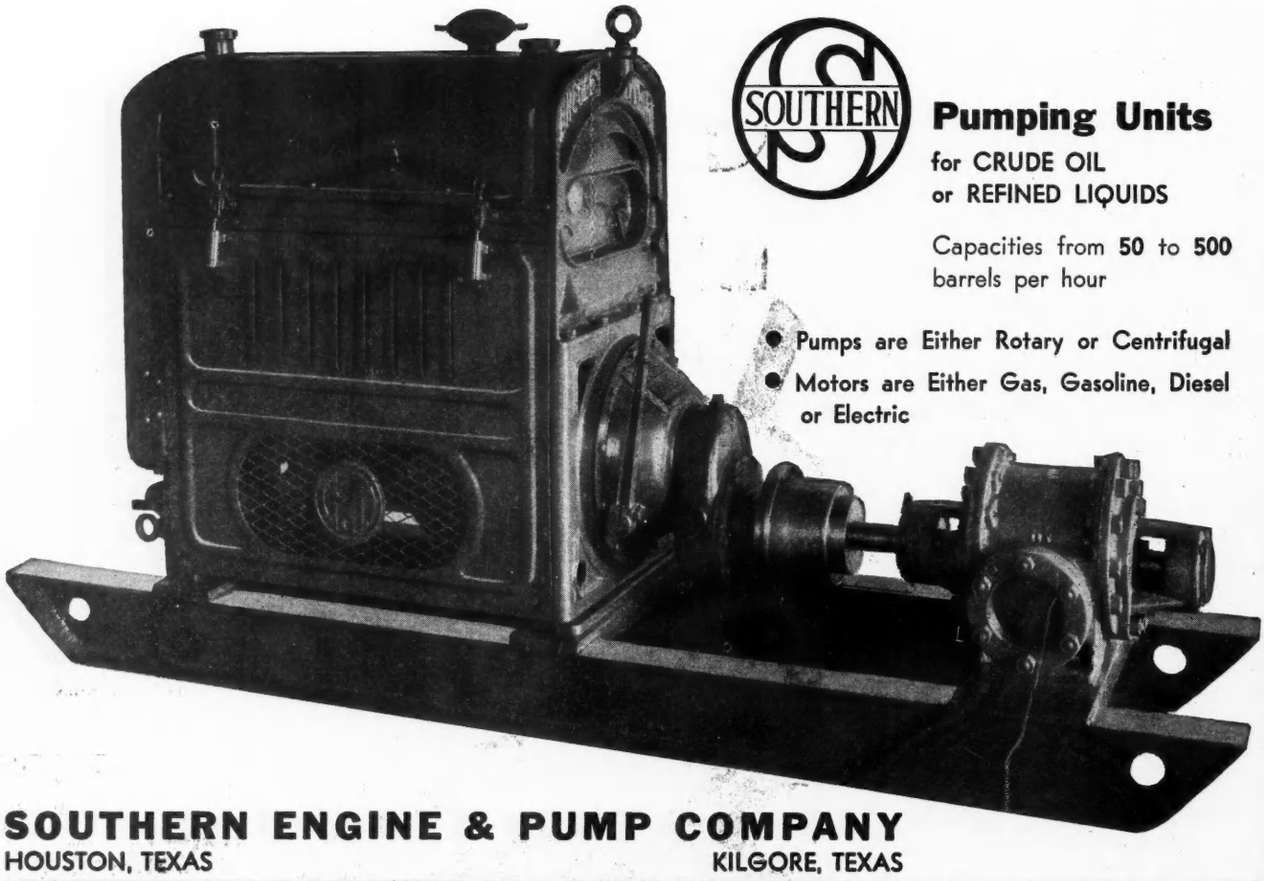
MICHIGAN

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GRATIOT COUNTY—		
Cartier Oil Co.'s McConkey 1, c w½ ne nw 23-11n-2w	*	3260
L. T. Barber's Stoffs 1, c ne ne, 8-10n-4w	¶6	1000
ISABELLA COUNTY—		
Mountain Oil & Gas Co.'s Thompson 1, se se ne, 17-15n-6w	*	3702
LAPEER COUNTY—		
Co-Op & Miller's Kurtz 1, se ne sw, 5-8n-9e	*	2420
Kinnekenik Land Co.'s Neer 1, se sw sw, 29-6n-9e	*	2240
MECOSTA COUNTY—		
Stewart-Atha's Amsden 6, c se sw, sec 31-13n-7w	¶37	1295
Marquette River's Nimbauger 1, sw ne sw 27-13n-9w	*	200
MONTCALM COUNTY—		
Wolverine Natural Gas Co.'s Searls 1, c sw sw, 2-12n-7w	¶30	1300
Richardson 2, sec 3-12n-7w	¶26	1296
Gulf Refining Co.'s Evey 1, nw ne nw 1-10n-5w	*	....
OGEMAW COUNTY—		
Gordon Oil Co.'s Harrington 1, se sw se, 14-22n-1e	*	....
A. E. Butterfield's Baumchen 1, ne nw sw, 27-22n-2e	140	2705
ROSCOMMON COUNTY—		
Fletcher & Leyman's Childers 1, nw ne se, 15-24n-1w	*	2962
SAGINAW COUNTY—		
C. W. Teater's Kilbourne 1, ne ne ne, 35-12n-1e	*	3276

*Failures; †Junked; ¶Million cu. ft. gas.

Taubman Supply Corporation, Houston, celebrated the opening of its new plant at 7100 Clinton Drive with a barbecue from noon to seven p. m. December 12.



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- Motors are Either Gas, Gasoline, Diesel or Electric

SOUTHERN ENGINE & PUMP COMPANY

HOUSTON, TEXAS KILGORE, TEXAS

THE OIL WEEKLY REPORT ON IMPORTANT *Wildcat Tests*

ALABAMA

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, nw sw 9-3n-29e, elev 191 ft, installing heavier rig to deepen, td 4002 ft.

MOBILE COUNTY — Grand Bayou O&G Co.'s J. A. Stafford 1, sw sw 24-7s-3w, lcn.

ARKANSAS

COLUMBIA COUNTY—King Oil Corp.'s Fullenwider & Kitchen 2, se nw 13-17-22, elev 326 ft, top anhydrite 3790 ft, arr abn as junked hole, td 3825 ft.

CLEVELAND COUNTY—R. L. Saxon's L. C. Tipton 1, sw ne 13-11-12, elev 207.4 ft, lcn abnd. J. R. Lockhart's I. Robertson 1, sw se 36-10-11, sd 3000 ft.

DALLAS COUNTY—Walter Lown's Atkinson 1, ne nw se 7-10-13, claim so in sand, sd cur titles, td 2418 ft sand.

GRANT COUNTY—Wallace & Staples' W. F. Davis 1, se se nw 23-6-15, logged sand 1861-69 ft, arr make ds test, td 1869 ft.

HEMPSTEAD COUNTY—H. D. Easton et al's Conway-Tiller 2, sw sw 34-12-27, elev 251 ft, sd 3005 ft, high water. Root Pet. Co.'s Jones 1, ne sw ne 16-13-23, elev 348 ft, top Nacatosh 595 ft, base chalk 1253 ft, top Tokio 1613 ft, dr 1680 ft.

MILLER COUNTY—Joiner et al's (Odell Hinson), Montana Realty Co. 1, ne nw nw 3-17-28, elev 225 ft, top first anhydrite stringer 4510 ft, massive anhydrite 4712-4815 ft, base lower stringer 4917 ft, 7-in csg 5270 ft, arr drill in and test, td 5278 ft. C. V. Lenz's Dale 7, 24-15-26, 7-in csg 4208 ft, swabbing with 2500 ft oih, 45.3 gravity oil, no water, td 4216 ft. J. T. Parke et al's Dean et al 1, sw se 24-15-26, (1800 ft s Lenz test), dr 3480 ft.

LA FAYETTE COUNTY—A. M. Neely's Meek 1, ne nw 35-19-25, spd, dr 400 ft.

NEVADA COUNTY—Benedum & Trees Oil Co.'s Groves 3, 10-14-20, 9⅝ in csg 1224 ft, elev 344 ft, top Nacatosh 1229 ft, pumping 175 bbls 14.8 gravity oil daily, no water, td 1243 ft; Groves 4, sw nw 10-14-20, dk; Groves 5, ne sw nw 10-14-20, rur; Groves 6, sw ne nw 10-14-20, lcn; Block 1, ne ne se 9-14-20, rur.; C. C. Fincher 1, nw sw ne 10-14-20, top Nacatosh sand 1264 ft, cemtd 7-in csg 1264 ft, woc, td 1271 ft. Jno. R. Lewis' Wm. Haynie 1, sw sw ne 10-14-20, dr 975 ft. L. M. Glascoe's Ritchie 1, nw se 10-14-20, coring 1200 ft; Ritchie 2, 3 and 4, nw se 10-14-20, lcns.

POPE COUNTY—Ark-La. Gas Co.'s L. C. Smith 1, sw sw se 10-8n-21w, 13⅜ in csg 1997 ft, dr 3345 ft.

PULASKI COUNTY — A. L. Kitselman's Fee 1, 2-1s-13w, dr 792 ft shale.

SALINE COUNTY—Duncan et al's Williams 1, 18-3-15, ru and sd.

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Mohawk Pet. Co.'s Langer 1, 30-16-15, dr shale 6110 ft. Western Gulf's S. P. Land Co. 3, 3-17-15, td 8531 ft, plugged, redr at 7800 ft.

KERN COUNTY

LERDO—Arkelo Pet. Co.'s No. 1, 23-28-26, dr sand and shale 6611 ft, os at 6431 ft.

RIO BRAVO—Associated's K.C.L. 1, 30-29-25, td 7683 ft, co at 5000 ft. Standard's K. C. 11-1, 19-29-26, td 7807 ft, os top 7742 ft, r to set casing at 7740 ft.

LOST HILLS — Associated's Williamson 12-A-3, 11-26-20, sd 1675 ft. Lincoln Pet. Co.'s No. 1, 12-26-20, td 1846 ft, plug 1140 ft, perforated 1124 to 1134 ft, bailing oil and water; Theta 2, 12-26-20, sd 2830 ft. Standard's United 2, 2-26-20, dr sandy shale 815 ft. Texas Co.'s Theta 1, 11-26-20, td 2037 ft, plug 1958 ft, pumping 340 bbls, 1 percent oil.

DEVIL'S DEN—H. C. and E. A. Long's No. 1, 20-25-19, dr gray sand 674 ft. Lube Oil Co.'s No. 1, 2-25-18, dr shale 290 ft. Den Pet. Co.'s Bates 1, 20-25-19, sd 1495 ft.

SO. MARICOPA—E. A. Bender's Robinson 1, 14-10-23, td 1235 ft, plug 750 ft, co. Trans-Line Pet. Corp.'s No. 1, 3-10-23, dr shale 210 ft.

SAN EMIDIO—I. L. Burch's No. 1, 3-10-23, dr brown shale 1814 ft. British American's No. 1-A, 21-31-27, td 1128 ft, wocs 20 in on bottom.

MOUNT POSO—Cal Coast Oil Co.'s No. 1, 36-26-27, dr gray sand 2651 ft.

WASCO—Continental Oil Co.'s K.C.L. A-1, 8-27-24, td 6503 ft, redr at 4820 ft in sandy shale.

JASMINE—Doyle Pet. Co.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, bailing 13 gravity oil.

EDISON AREA — East Edison Oil Co.'s Tejon 1, 21-30-30, td 1130 ft at last report; No. 2, 22-30-30, lcn.

ARVIN—General Pet. Corp.'s Arvin 1, 26-31-29, td 7462 ft, top granite 7457 ft, wocs 8⅝ in at 6570 ft.

GRAPEVINE—Hall-Baker Co.'s Tejon 1, 12-10-19, dr shale and os 1972 ft. 99 Oil Co.'s Tejon 1, 5-10-19, dr sand and clay 350 ft. Ohio Oil Co.'s Title Ins. D-1, 21-11-19, dr shale streaks sand 5730 ft. Reserve Oil & Gas Co.'s Ritchie 33-1, 33-11-19, td 6030 ft, plug 4990 ft, perforated 4935 to 4975 ft, swabbing water; Tejon 33-2, 33-11-15, td 4505 ft, plug 4414 ft, standing; Tejon 33-3, dr sandy shale 610 ft.

MOUNTAIN VIEW — Mohawk Pet. Co.'s Earl Fruit 2, 16-31-29, td 6164 ft, wocs 6⅝ in at 6070 ft; Earl Fruit, rig. Shell's Greer 1, 15-31-29, td 6171 ft, plug 6148 ft, perforated 6107 to 6121 ft.

KERN FRONT—Seskayden Oil Co.'s Sesnon 2, 17-28-27, td 2920 ft, in os, wocs 8⅝ in at 2865 ft.

TEN SECTION—Superior Oil Co.'s K.C.L. 8, 11-30-26, dr sandy shale 7776 ft.

ARVIN—Superior Oil Co.'s No. 1, 26-31-29, foundation.

MISCELLANEOUS

ALAMEDA COUNTY—Seaboard Oil Corp.'s Johnson 1, 13-3-3, td 5925 ft, in hard shale, no showings, abn.

HUMBOLDT COUNTY—Texas Co.'s Eureka 2, 22-3-1, dr shale 6518 ft.

KINGS COUNTY—Associated's Avenal 2, 35-23-17, bldg rig. A. S. Clare's Laymance 1, 20-20-22, foundation. Milheim Oil Corp.'s Resources 1, 20-22-22, sd 5810 ft.

SAN BENITO COUNTY — Associated's Murphy Ranch 1, 5-12-4, td 4784 ft, fsh.

SAN JOAQUIN COUNTY—Standard's McDonald Island 2, 19-2-5, dr sandy shale 5436 ft.

SOLANO COUNTY—Amerada Pet. Corp.'s Hamilton 1, 26-4-2, dr hard shale streaks sand 6318 ft; Hoppe 1, 22-4-2, sd 7029 ft.

TULARE COUNTY—J. W. Alford's Williams 1, 28-16-23, sd 1023 ft. R. R. Ellis' Ellis 1, 20-24-23, bldg rig. E. P. Jennings' No. 1, 4-24-23, dr blue clay 2820 ft. Seaboard Oil Corp.'s Security 1, 16-23-26, lcn. Trico Oil & Gas Co.'s Calif. Western 1, 2-23-23, sd 1800 ft; Callison 1, 27-21-25, sd 3377 ft.

MONTEREY COUNTY—Amil A. Anderson 1, 15-24-14, rig. Shell's Branch 2, 34-24-10, dr shale 5114 ft. Texas Co.'s Dunphy 1, 30-19-7, rur.

SAN LUIS OBISPO COUNTY

CHOLAME—Cholame Synd.'s Jack 2, 10-25-15, td 3648 ft, wocs 5¾ in at 3637 ft.

ARROYO GRANDE—A. T. Jergins Trust's Indian Knob 1, 26-31-12, dr sand and shale 1100 ft.

OCEANO AREA—Archie Mayes' No. 1, rur.

SAN LUIS OBISPO—R. W. McBurney's No. 1, 23-32-22, td 2150 ft, bailing water, trace of oil.

HUASNA VALLEY—Union's Porter 1, 22-32-15, dr hard shale streaks sand 3506 ft.

PANORAMA HILLS—United Foreign Oil Co.'s No. 2, 2-32-21, dr hard sand 2328 ft.

SANTA BARBARA COUNTY

EL CAPITAN—Associated's Edwards Estate 1, 2-4-30, dr red shale streaks sand 2360 ft.

GATO RIDGE—Barnsdall's Tognozsini 2, td 2500 ft, running 8⅝ in, ran formation tester. Ben Moyle et al's Arrata 1, 4-8-32, lcn. Petrol Corp.'s Tognozzini 1-A, 9-8-32, foundation. Todos Santos Oil Co.'s No. 1, 4-8-32, foundation.

SUMMERLAND—Julias Dietzman's Fithian 1, 8-4-25, td 1025 ft, to dr ahead with cable tools.

CASMALIA—Golden Bear Oil Co.'s No. 1, 20-9-34, rig. Todos Santos Oil Co.'s No. 1, 29-3-34, td 2365 ft, bailing mud and oil.

BETTERAVIA—E. H. Moore's Union Sugar A-1, 25-10-35, td 8020 ft, fsh.

POINT CONCEPTION—101 Oil Co.'s Hollister 1, 35-5-33, set 13 in at 250 ft, to dr ahead.

SANTA MARIA—W. D. Shaffer's Houk 1, 9-9-33, dr sand and gravel 220 ft.

LOMPOC—Top Row Oil Co.'s Spanne 1, 6-35, sd 1310 ft.

VENTURA COUNTY

RED MOUNTAIN—Continental Oil Co.'s Casitas 1, 7-3-23, dr hard sand streaks shale 2971 ft.

SOUTH MOUNTAIN—Honolulu Oil Corp.'s Hobson 1, 23-3-21, dr hard gray sand 5230 ft.

OXNARD — Vaca Oil Explor. Co.'s Calif. Lands 1, 6-1-21, td 2830 ft, plug 2150 ft, washing and swabbing.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, sd 9525 ft.

SOUTHERN CALIFORNIA

NEWHALL—Barnsdall's Rancho S. F. 1, 26-4-17, dr hard sand and shale 5508 ft. Holbrook Pet. Co.'s Newhall L&F Co. 1, 28-4-16, td 4025 ft, rigging heavier equip.

LYNWOOD—Calizoo Oil Co.'s Salque 1, 9-3-13, td 3920 ft, milling.

LOS ALAMITOS—Calmont Oil Co.'s Montana 1, 14-4-12, lcn.

WEST COYOTE—N. H. Clayton's No. 1, 22-2-11, lcn.

NO. LONG BEACH — Geo. L. Clayton's Clayton 1, 32-3-12, td 800 ft, wocs 11¾ in on bottom.

EAST WHITTIER—Driller's, Inc.'s No. 1, 22-2-11, rur.

CLEARWATER—H. Heide's Rogers 1, 20-3-12, bldg rig.

MONTEBELLO—Honolulu Oil Corp.'s Core Hole 1, 14-2-12, bldg rig.

PUENTE—Honolulu Oil Corp.'s Butler 1, 15-2-10, lcn.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, dr tough brown shale 640 ft.

ASCOT SPEEDWAY—Republic Pet. Co.'s Jordan 1, 24-1-13, td 1567 ft, plug 1468 ft, tested wet, sd.

DAVISON CITY—Shell's Flood Control 1, 11-4-13, sd 4307 ft.

ROSECRANS—Shell's McKinley 4-1, 20-3-13, dr sand and shale 2003 ft.

HAWTHORNE — Signal Finance Corp.'s Woods 1, 10-3-14, td 9326 ft, hung tubing at 4000 ft, swabbed, flowing muddy water.

GARDENA—Standard's Badger 1, 22-3-14, dr sand and shale 7730 ft. Universal Cons.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so&g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

Carrell 1, 35-3-14, dr sand and shale 5648 ft, no showings.

FOX HILLS—Superior Oil Co.'s Inglewood Ext. 1, 25-2-15, dr shale 9090 ft.

ORANGE COUNTY — Calif. Eastern Oil Co.'s Verde 1, 31-3-9, td 4750 ft, milling on dr pipe. Mesa Oil Co.'s Mesa 1, 29-6-10, td 3490 ft, in hard sand, co. West Coast Ref. Co.'s Yorba 1, 25-3-9, dr hard sand and directing hole 2560 ft.

COLORADO

ARCHULETA COUNTY—Cortez Oil Co.'s A-Crowley 1, cwl ne ne 2-32n-2e, sd 100 ft for winter. Oil City Petroleum Co. and Archuleta Oil & Gas Co.'s Reeder 1, swc lot 5, 24-33n-2e, sd 1185 ft for winter. Sharp et al's Walcott 1, cs se 34-33n-2e, sd 250 ft for winter.

KIOWA COUNTY—Gulf Oil Corporation's Risser-Union Pacific 1, csw ne 1-17s-50w, dr 2910 ft.

LA PLATA COUNTY—Detroit Oil & Gas Co.'s 1, sw sw 8-35n-12w, fsg 3397 ft.

LINCOLN COUNTY—Consolidated Smelting & Metals Corporation's Hancock 1, ne ne sw 7-17s-52w, sd 2098 ft.

PUEBLO COUNTY — Phillips Petroleum Co.'s Andover-Century 1, ne sw nw 26-18d-65w, coring at 1455 ft in Dakota.

ROUTT COUNTY—Mid-Colorado Petroleum Co.'s Omholt 1, ne ne se 29-4n-87w, sd 2910 ft for winter.

PARK COUNTY — South Park Oil Co.'s State 1, se se sw 16-11s-75w, dr 5405 ft with 4¼ in csg at 5400 ft. Lemarr 1, ne ne se 34-11s-75w, dr 2812 ft with 10¾ in csg at 2795 ft.

WELD COUNTY — Continental Oil Co.'s Briggs 2, cne sw 13-6n-61w, dr grey shale at 6956 ft, passed out of Dakota at 6835 ft.

FLORIDA

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 2, se se 17-24s-25e, elev 120 ft, coring 5668 ft.

NASSAU COUNTY—St. Mary's River Oil Corp.'s Hilliard Turpentine Co. 1, nw ne se 19-4n-24e, elev 110 ft, woc 12½ in csg 822 ft.

POLK COUNTY — Edw. A. Hill's Polk County Lbr. Co. 1, nw ne 32-25s-25e, elev 90 ft, dk.

KANSAS

BARBER COUNTY—Pure's Palmer 1, se ne sw 10-33s-10w, dr 2821 ft.

BARTON COUNTY—C. L. Price's Deutsch 1, nw nw ne 16-16s-13w, 2000 ft oih, 10 days Minnehoma O&G Co.'s Smith 1, nw nw ne set 12-in csg 791 ft, woc. Duee & Brouk's Baker 1, ne se sw 16-17s-13w, dr 317 ft. Freehorn et al's Sooy 1, nw nw ne 27-18s-12w, rig. John Burton's Wendel 1, ne ne ne 13-19s-11w, ur 8-in csg 2067 ft. I. T. I. O. Co.'s Schrepel 1, se se ne 26-20s-11w, brr.

BUTLER COUNTY—Wixon et al's Coulter 1, nw sw ne 3-27s-7e, dr 1098 ft.

CHASE COUNTY—Hanna et al's Brothers 1, se se nw 25-20s-8w, rig. Propp et al's Fromm 1, se se se 29-18s-9e, dr 2422 ft.

COWLEY COUNTY—Home Natural Gas & McNish' Werner 2, se se sw 31-22s-6e, pb 1900 ft. Wakefield et al's Tinker 1, nw nw se 26-32s-3e, dr 3200 ft. Tom Palmer's Pierce 1, se se sw 14-31s-3e, set 15-in csg 150 ft, woc. Austin & McKnabb's Wilson 1, ne ne se 20-32s-6e, dr 175 ft. C. H. Cross' Cook 1, sw sw sw 6-32s-6e, dr 685 ft.

EDWARDS COUNTY—Stanolind & Elwell's Donovan 1, cse se 14-25s-18w, dr 4593 ft.

ELLIS COUNTY—Empire's Samuelson 1, ne ne sw 31-11s-16w, ur 5-in csg. Ted Kerr et al's Koblitz 1, se sw nw 23-12s-18w, dr 3694 ft. Glick & McMorrow's Staab 1, sw sw se 6-13s-17w, dr 3520 ft. Taylor et al's Emery 1, ne ne ne 23-14s-18w, woc. Murphy Oil Co.'s Wiesner 1, se se sw 12-14s-19w, fsg 815 ft. Jones Bros. et al's Phillips 1, se se nw 9-15s-17w, dr 1210 ft. Lario Oil & G. Co.'s Cress 1, ne ne ne 13-11s-17w, dr 2125 ft. Loomis & Etyner's O'Laughlin 1, se se nw 27-12s-18w, rot rig.

GRANT COUNTY—Columbian Fuel Co.'s Gray 1, cse 3-29s-35w, co.

GREENWOOD COUNTY—Estes et al's Edgar 1, nw nw se 1-28s-8e, td 1848 ft, D&A. Scott et al's Pedroja 1, se ne se 6-26s-10e, flow 300 bbls oil, 48 hrs. Holis et al's Boone 1, ne ne nw 21-26s-12e, mim.

HARVEY COUNTY—Harburney Oil Co.'s Schragg 1, nw nw se 24-22s-3w, sd 3350 ft. Saco et al's Guthrie 1, ne ne nw 8-22s-2e, sd 2090 ft.

KEARNEY COUNTY—J. L. Murphy et al's Campbell 1, nw nw sw 32-25s-35w, td 3595 ft.

LOGAN COUNTY—Rosespring Drlg. Co.'s Wright 1, cse se 12-15s-35w, dr 3375 ft.

MARION COUNTY—Western Kansas O&R Co.'s Hauser 1, sw sw sw 19-19s-4e, dr -1765 ft.

MITCHELL COUNTY—Geo. Siedhoff et al's Greiss 1, sw sw se 16-8s-10w, dr 560 ft.

NESS COUNTY—Newton Dev. Co.'s Tenny 1, nw nw se 19-18s-25w, sd 2450 ft. Sayre Oil et al's Ryersee 1, cne se 34-18s-21w, td 4696 ft, D&A.

PAWNEE COUNTY — Kessler & Their's Shea 1, ne ne ne 22-21s-17w, dr 4023 ft.

PRATT COUNTY—H. V. Elwell et al's Fay 1, nw nw se 15-27s-14w, fsg 3500 ft.

RENO COUNTY—Miller et al's Detter 1, ne se nw 28-22s-7w, dr 3583 ft. Foraker et al's Hiett 1, se sw ne 34-24s-4w, fsg 3685 ft. Clyde Pulse et al's Payne 1, sw nw ne 4-22s-7w, sd 1940 ft. Inca Prod. Corp.'s Moore 1, cne ne 26-24s-3w, sd 2860 ft. Empire's Schrock 1, nw nw ne 22-24s-5w, woc 930 ft. Westgate-Greenland Oil Co.'s Fossey 1, sw sw se 12-22s-8w, td 3577 ft, so and 1000 ft wih.

RICE COUNTY—Carlock et al's Deweese 1, sw nw nw 32-20s-7w, sdo. Shell Pet. Corp.'s Soenken 1-A, cnw 10-19s-9w, pb 3010 ft, woc. Aylward et al's Johnson 1, nw nw ne 12-21s-7w, rust 3360 ft. I. T. I. O. Co.'s Fossey 1, sw sw ne 31-20s-10w, dr 815 ft. Charles Pet. Corp.'s Speck 1, nw nw se 29-20s-8w, dr 1915 ft. Permian Oil Co.'s Monroe 1, cne ne 9-20s-7w, owdd, ru 8-in csg 2840 ft.

ROOKS COUNTY — L. C. D. Drlg. Co.'s Westhusin 1, cne se 11-19s-17w, td 3243 ft, P 504 bbls oil. J. A. Shoemake's Stebbins 1, ne ne sw 26-7s-17w, testing. Buckner & Schoff's McConnell 1, ne ne ne 34-6s-18w, dr 1460 ft. Empire's Ham 1, sw nw nw 24-8s-19w, fsg 2810 ft. Jarvis & Strickland's Hamel 1, se se sw 7-8s-20w, cor 3520 ft. Snowden & McSweeney's Hindman 1, ce½ nw 35-7s-17w, woc 1243 ft. Graham et al's Pike 1, sw sw sw 9-9s-17w, dr 1510 ft.

RUSH COUNTY — Schoenfeld & Kitch' Winget 1, se se se 15-16s-16w, co. H. M. Pigott et al's Maresch 1, cnw nw 28-19s-19w, lcn.

RUSSELL COUNTY—Empire's Frederick 1, se se se 18-15s-11w, dr 700 ft. Equity Gas Co.'s Harbauk 1, nw ne sw 19-13s-12w, sd 470 ft.

SALINE COUNTY—James Brouk et al's Othelander 1, ne nw se 10-16s-13w, dr 3004 ft.

SEDGWICK COUNTY—Lauck's McLean 1, csw se 1-27s-1w, dr 4675 ft. R. J. Wallace et al's Sheer 1, sw sw sw 22-27s-3w, set 6-in csg 4110 ft, woc. Cameron et al's Smith 1, sw se se 13-27s-2e, spd and sd.

SEWARD COUNTY—Helmerich & Payne's Hyde 1, csw 14-31s-34w, ru.

SHERIDAN COUNTY—O. A. Roberts et al's Corrick 1, cnw 34-9s-26w, td 255 ft, woc.

SMITH COUNTY—Helmerich & Payne et al's Meyer 1, ne ne sw 10-15s-11w, td 4161 ft, D&A.

STAFFORD COUNTY—Skelly's Kipp 1, se se ne 27-25s-14w, dr 4157 ft. C. E. Skiles et al's Leidigh 1, nw nw sw 21-22s-11w, set 6-in csg 3420 ft, co. Empire's Jordan 1, sw sw nw 15-25s-14w, 2900 ft oih, 15½ hrs. Skiles et al's Hughes 1, sw sw sw 12-23s-12w, sd 175 ft. Atlantic et al's Davis c-46 1, se se sw 32-23s-12w, dr 3880 ft. Lebow et al's Wolf 1, se sw nw 3-21s-12w, dr 1110 ft.

SUMNER COUNTY — Rosespring Drlg. Co.'s Rutter 1-A, cnw nw 21-33s-2e, rust. W. C. McBride & Olson's Kinlund 1, ne nw ne 24-34s-1e, td 3908 ft, D&A. Empire's Hoffman 1, nw sw sw 27-34s-1e, dr 2585 ft. Graham et al's Dawson 1, nw nw nw 4-33s-2w, dr 3305 ft. Lario et al's Hall 1, nw sw nw 11-35s-1e, dr 1105 ft. Lloyd, Frost, Study et al's Fee 1, se se se 31-34s-1e, rur. Orcutt & Stewart's Newton 1, se se se 21-30s-2e, dr 605 ft.

TREGO COUNTY—York State Oil Co.'s Gugler 1, sw sw sw 36-12s-21w, pb 3832 ft, woc. Black Gold Co.'s Allman 1, csw sw 34-14s-21w, lcn.

WOODSON COUNTY — Dunn & Lewis' Dawson 2, cne ne 27-26s-13e, td 1200 ft, D&A. Dwyer et al's Wolf 1, ne ne sw 9-24s-14e, sd 1340 ft.

NORTH LOUISIANA

BIENVILLE PARISH—Lide-Greer et al's J. D. Smelley 1, se sw ne 13-16n-5w, 16-in csg 257 ft, dr 2400 ft. Desoto O & G Co.'s Dunn & Olsen 1, n½ nw 15-16n-10w, elev 259 ft, massive anhydrite 3985-4217 ft, base stringer 4276-4301 ft, tested 20 joints sw 4280-4462 ft, tested 5mil ft, gas 5200-5236 ft arr set 7 in csg. McDowell et al's Locke 1, ne nw ne 9-15n-9w, elev 180 ft, tested show mud & slight sg 1080-92 ft, dr 1200 ft. Texas-Seaboard's McGee 1, 3-16n-6w, fsh 6186 ft.

BOSSIER PARISH—Ark. La. Gas Co.'s Davis 1, 8-17n-11w, woc 2560 ft. Potter 1, 8-17n-11w spd dr 1090 ft. United's Skannal G-1, c se ne 22-17n-12w, elev 188 ft top anhydrite stringer 3707 ft, massive anhydrite 3935-4160 ft, base anhydrite stringer 4238 ft, 9-in csg 3238 ft, 7 in csg 5152 ft flowing est 20 bbls oil per hour ⅜ in tub choke, wo gauge td 5170 ft Petitt sand.

CADDO PARISH—Ferguson & Co.'s Huckabay 1, 22-22n-16w, dk. Gulf's E. P. Hatcher 1, 11-17n-15w, elev 269 ft top Travis Peak 5998 ft, dr 7425 ft.

CLAIBORNE PARISH—E. T. Oakes' & H. D. Easton's Patton Est 2, ne ne 1-20n-5w, elev 357 ft, 7-in csg 5007 ft, cored oolitic lime so & sg 5359-79 ft, ran electrical tester, cemtd 5 3/16 in csg 5305 ft, arr drill in & test, td 5379 ft. Sugar Creek Synd's Taylor 1, 5-19n-5w, top stringer anhydrite 4032 ft, top massive anhydrite 4272 ft, top Travis Peak 5702 ft, dry 5718-5809 ft pb & tested sw 4900-5100 ft, arr abn old td 5927 ft. Max Hirsch et al's C. O. Ferguson 1, nw sw 29-22n-6w, rur.

CATAHOULA PARISH—C. P. Brown's T. J. Chisum 1, 19-10n-8e, dk & mir. Matheny & Schumacher's W. S. Peck 1, 40-10n-8e, mim.

DE SOTO PARISH—Sundby et al's Garland 1, se nw 7-14n-14w, elev 300 ft, base Annona chalk 2095 ft, top Tokio 2592 ft, top Washita 2690 ft, dr 2822 ft, lime (Washita). Julian-Igoe Synd's Hallie Smith 1, se se 31-14n-15w, lcn. Grogan et al's Ramsey 1, 36-11n-11w, hole clean arr deepen td 1780 ft. Sanders et al's L. N. Allison 1, nec 17-14n-13w, mir. R. C. Payne's Harris 1, 11-13n-14w, sd 2990 ft. Pearl Oil Corp.'s Joyner 1, se nw sw 28-11n-12w, dr 1585 ft. Chamberlin et al's Lanier 1, 29-11n-11w, dk. Grady Vaughn et al's sample 1, 24-11n-14w, rur, (5500 ft test).

FRANKLIN PARISH—Sherrouse & Snyder's Kimble 1, ne se sw 36-12n-8e, elev 65 ft, 12½ in csg 250 ft, base Jackson 684 ft so & g 1500 ft, top Cane River 2450 ft, top Wilcox 2825 ft, ran electrical tester arr abn td 3010 ft. S. C. Jensen's Bailey 1, c se nw 12-11n-6e, arr abn & move to new lcn nearby, old td 2285 ft.

GRANT PARISH—H. Weir's McQuin 1, 10-7n-3w, lcn abnd.

NATCHITOCHES PARISH — Natchitoches Oil Co.'s J. S. Simpson 1, 12-7n-7w, sd 1350 ft. Lent et al's Locke 1, se sw 26-9n-9w, sd 30 ft. Union Pet. Co's DeBlieux 2, 83-10n-7w, sd 3951 ft chalk.

RED RIVER PARISH—Hunter et al's Long-Bell Lbr. Co. 1, ne ne 19-13n-9w, 7 in csg 3696 ft, sdtr recored top sand 3706 ft, re-testing old td 3734 ft.

RICHLAND PARISH—Gulf's R. R. Rhymes 15, nw se ne 32-17n-6e, elev 87 ft, top anhydrite 2936 ft, base red beds 6380 ft, 7 in csg 8040 ft dr 8185 ft.

SABINE PARISH — Earl F. Fox's L. B. Blankenship 1, 13-9n-12w, rur. Whitehurst et al's Whitney Corp. 1, c nw ne 8-9n-13w, blew out making est 40 to 50 mil ft wet gas & show oil & distillate while running tub at 4170 ft, showed 1140 pound rock pressure si, old td 5503 ft. Luther Swift's Long-Bell Lbr. Co. 1, 11-8n-14w, spd dr 600 ft. A. C. Scott's Bowman-Hicks Lbr. Co. 1, nw sw 23-9n-13w, owdd 2020 ft.

WEBSTER PARISH—Ohio Oil Co.'s Bodcaw Lbr. Co. 1, c ne se 28-21n-10w, elev 234.8 ft top anhydrite stringer 3969 ft, top massive anhydrite 4225 ft, base anhydrite stringer 4546 ft dr 7637 ft. R. M. Coyle 1, c ne se 22-21n-10w, elev 215.8 ft, massive anhydrite 4119-4359 ft dr 7512 ft. United's Nixon 1, 22-21n-10w, elev 230 ft, top massive anhydrite 4195 ft, top Travis Peak 5585 ft dr 7106 ft. C. V. Davis 2, c nw nw 23-21n-10w, ds stuck 7090 ft. Magnolia's Cox 1, 23-21n-10w, 9 5/8 in csg 6477 ft, dr 7230 ft R. W. Norton's Fee 1, 27-21n-10w, mim. Woodley Pet. Co.'s L. C. Cox 1, sw ne 22-21n-10w, top massive anhydrite 4144 ft, cored porous Travis Peak sand 5542-49 ft, cored hd dense lime 5549-53 ft r to 5525 ft, set 7 in csg, td 5553 ft, woc. Seaboard Oil Corp.'s Cotton Valley L & T Co.'s 1, nw sw 35-22n-10w, elev 200 ft, massive anhydrite 4530-4735 ft top red beds 3340 ft, top Travis Peak 5961 ft, coring 6035 ft. Tidewater Oil Co.'s L. Pipes 1, 10-18n-10w, top Nacatosh 1535 ft, base chalk 2075 ft, top Blossom 2232 ft, top red beds 3167 ft, dr 3315 ft. Standard of La.'s Fudicker 1, se nw nw 2-17n-9w, dr 3445 ft.

WINN PARISH—C. W. Cline's Collingsworth Hrs. 1, se se 14-10n-6w, dk & mir.

SOUTH LOUISIANA

ACADIA PARISH—Humble's Nordyke 1, Ebenezer prospect, 23-10s-1e, dr shale 2145 ft. Superior Oil Prod. Co.'s Savoy 2, Bayou Mallet area, 47-7s-1e, preparing to spud.

AVOYELLES PARISH—Coastal Minerals Dev. Co.'s Haas 1, 25-2n-3e, lcn.

CALCASIEU PARISH—Union Sulphur's M. P. Irwin 1, se of Lake Charles, 10-10s-8w, dr shale 6425 ft.

CAMERON PARISH—Pure's State 1, Mallard Bay prospect, 22-13s-3w, dr hard sand 7350 ft.

EAST BATON ROUGE PARISH—Cavalier Oil Co.'s Vignes 1, ne of Hope Villa, 40-8s-2e, sd 6690 ft. Louisiana Crusader's Oil Co.'s L. S. U. 1, University Block, 67-7s-1w, reaming 6382 ft.

EAST FELICIANA PARISH—Barnett Pet. Corp.'s Tullas 1, 34-2s-1w, pits.

IBERIA PARISH—Texas Co.'s State 2, Fausse Point area, 35-11s-8e, dr cement plugs 6444 ft; same operator's State Vermilion Bay 1, in Vermilion Bay, 16s-5e, dr shale 9500 ft.

IBERVILLE PARISH—Humble's Wilbert 1, Bayou Blue area, 67-9s-11e, dr salt 4218 ft.

JEFFERSON PARISH—Triangle Oil Co.'s Carroll 1, 125-12s-11e, reaming 1903 ft.

JEFFERSON DAVIS PARISH — Shell's Sturdevant 1, South Roanoke prospect, 25-10s-4w, fsh 9749 ft.

LAFOURCHE PARISH—Wm. Helis's City of New Orleans 1, Marchland prospect, 19-2s-23e, dr shale 5377 ft. Pan American's Harange 1, Valentine prospect, 7-17s-20e, dr shale 4255 ft.

PLAQUEMINES PARISH—Gulf's State 1,

in Bay Adams, 32-19s-28e, dr shale 2357 ft. Tide Water's Manhatten Fruit Co. 2, Venice dome, 26-21s-30e, dr shale 4700 ft.

ST. BERNARD PARISH—Gulf's State 1, Lake Lery area, 28-14s-14e, dr shale 2570 ft. Southern Sulphur Co.'s State 2, Lake Bargne, 38-14s-15e, dr shale 1140 ft.

ST. JAMES PARISH — Shell's Colonial Sugar 2, Hester prospect, 5-12s-5e, coring shale 8221 ft.

ST. LANDRY PARISH—Stanley Thompson's Lewis 1, ne of Port Barre, 29-5s-6e, dr shale 5590 ft. Superior Oil Producing Co.'s A. Savoie 1, ne of Bosco, 26-8s-2e, coring 9370 ft.

ST. MARTIN PARISH—Shell's Hefea Land Co. 1, Arnaudville area, 38-8s-5e, dr sand and shale 7460 ft. Texas Co.'s State 3, Lake Mongouloi prospect, 14-10s-9e, lcn.

ST. MARY PARISH—Texas Co.'s Bayou Sale 1, Wax Lake prospect, 40-17s-9e, conditioning mud 8945 ft.

TERREBONNE PARISH—Humble's Elender 1, Houma gas field, 23-19s-19e, dr shale 8757 ft. Shell's Realty Operators 1-B, 11 mi w of Houma, 18-17s-15e, dr sand and gravel 849 ft.

VERMILION PARISH—Continental's Hebert 1, Abbeville prospect, 20-12s-3e, coring 11,798 ft. Stanolind's Fred Stovall 1, South Abbeville or Intercoastal prospect, 89-14s-3e, dr shale 9276 ft.

MICHIGAN

ARENAC COUNTY—McClanahan Oil Co.'s Me 1, sec 11-20n-4e, Dundee 2463 ft, fsg 2509 ft. Central Drilling Co.'s Fisk 1, sec 16-19n-4e, dr 2390 ft. Petroleum Exploration's State 1, 32-20n-5e, dr 362 ft.

CLARE COUNTY—McClanahan Oil Co.'s Robinson 1, 31-17n-4w, dr 1900 ft. Wittmer Oil Co.'s Musgrove 1, 15-24n-1w, dr 1410 ft. Sun Oil Co.'s Campbell 1, 12-19n-3w, dr 1289 ft.

CLINTON COUNTY—Petroleum Exploration's Schneeberger 1, 11-5n-2w, sd 870 ft. Prima Oil Co.'s Fitzpatrick 1, ne ne ne, 10-8n-4w, rig.

GLADWIN COUNTY—J. V. Wicklund's State A-1, 11-18n-1w, dr 1900 ft. McClanahan Oil Co.'s Every 1, sw nw nw, 10-17n-1e, mim. Muskegon Development's Wineman 1, 33-18n-1e, sd 3520 ft.

GRATIOT COUNTY—Red Man Oil Co.'s Duckworth 1, 9-11n-3w, dr 1710 ft. Chas Anderson's Askergrad 1, 9-9n-1w, dr 515 ft. Elba Gas Corp.'s Kish 1, 19-9n-1w, dr 180 ft. Ithaca Exploration Co.'s Hart 1, 10-10n-3w, dr 3060 ft. Gulf Refining Co.'s Moorman 1, nw nw nw, 7-11n-2w, dr 160 ft. Herbert Snell's Smead 1, 20-11n-4w, sd 3065 ft. John Pentowoski's Sharrar 1, 23-11n-14w, dr 1450 ft Chas. Weller's Bolyard 1, nw nw se, 27-9n-3w, rig. Sam Siegel, tr.'s Kerr 1, n½ nw ne, 36-10n-1w, dr 360 ft.

HILLSDALE COUNTY—Jacob Beck's Fee 1, 16-6s-3w, dr 3260 ft. B. D. Chandler's Bricker 1, sec 11-Wright twp, sd 2000 ft. H. H. Heinig's Daley 1, 10-7s-4w, dr 200 ft.

HURON COUNTY—C. W. Teater's Inda 1, se se sw, 32-18n-13e, rig; Keller 1, 27-16n-11e, sd 600 ft (corrected).

KENT COUNTY—J. H. Hansen's Garbow 1, 3-10n-9w, sd 1150 ft. Central Michigan Drilling Co.'s Fletcher 1, 25-7n-10w, dr 160 ft.

LENAWEE COUNTY—St. Louis Pipe & Supply Co.'s Dibbie 1, 16-5s-3e, sd 2720 ft. Socony Vacuum's Russel 1, 25-5s-5e, dr 2000 ft.

LIVINGSTON COUNTY—J. E. Flanigan's Curdy 1, 18-3n-5e, sd 130 ft.

MACKINAC COUNTY—Van Kuren & Montigel's Hiawatha Club 1, 17-44n-9w, Trenton 1020, Base Trenton 1280 ft, td 1501 ft, pb 1300 ft, shot 160 quarts nito, co.

MISSAUKEE COUNTY—M. J. Ingold's Donley 1, 31-22n-8w, dr 3290 ft. Rex Oil & Gas Co.'s Meckoff 1, ne ne se, 30-21n-6w, sp.

MONTCALM COUNTY—L. T. Barber's Rice 1, 20-12n-7w, std 3037 ft. R. E. Gallagher's Hayden 1, 25-11n-7w, sd 600 ft. Daily Crude Oil Co.'s Weatherby 1, 20-12n-9w, Monroe 3311 ft, sg & o 3311-18 ft, td 3324 ft, treated 1000 gallons acid Dec. 5, swab in tubing, flowed 41 barrels thru casing Dec. 8.

OGEMAW COUNTY — Gordon Oil Co.'s Everitt 1, 13-23n-2e, dr 910 ft. H. C. Nelson's State 4, 31-22n-3e, sd 1635 ft.

OSCEOLA COUNTY—M. B. Keeler's Beall 1, 24-18n-9w, dr 1400 ft. Dible Brother's Townsend 1, 4-20n-17w, dr 1650 ft.

SAGINAW COUNTY — Hubel Oil Co.'s Schwigner 1, 5-11n-6e, sd 2890 ft. Jaenickie Oil Co.'s Moulton 1, 31-12n-2e, sd 3230 ft. Monitor Oil Co.'s Turnwald 1, 32-9n-4e, dr 2340 ft. Goll, Graves & Mechling's Mossner 1, sw sw nw, 16-10n-6e, mim.

MISC COUNTIES: Bay—Hogan & Wright's Sobuary 1, 12-17n-4e, rig. Isabella—Michigan City's Bacome 1, 19-13n-4w, sd 1628 ft. Monroe—Nicholas Huffmaster's Bordine 1, 16-5s-6e, sd 2610 ft. Newaygo—M. R. Schemahorn's Cain 1, 24-12n-11w, loc. Ottawa—Muskegon Oil Corp.'s Wolting 1, 35-6n-15w, dr 700 ft. Roscommon—North Michigan Oil Co.'s Hartwick 2, 31-24n-4w, sd 650 ft.

MISSISSIPPI

BOLIVAR COUNTY—White & Jones' Ballou 1, ne ne 18-24n-7w, arr deepen 1680 ft.

CLAIBORNE COUNTY — Claiborne O&G Drlg. Co.'s Crawford 1, 6-13n-4e, elev 115 ft, sd 2005 ft. Claiborne County Dev. Co.'s Ruth Hayden 1, 56-11n-2e, lcn.

HINDS COUNTY—Chichester et al's Gerwin 1, sw nw 12-5n-4w, sd for drill stem 984 ft gumbo. State of Mississippi's 2, nw nw 25-6n-1e, elev 326.5 ft, lost returns at 2790 ft, recementing csg at 2514 ft.

KEMPER COUNTY—R. A. Keaton et al's Buckwalter Lbr. Co. 1, nec 6-10n-14e, dk.

LAMAR COUNTY — Sun's Scanland & Semmes 1, c sw ne 28-4n-15w, elev 317 ft, 9⅝ in csg 1623 ft, coring 1938 ft.

PERRY COUNTY—Fred E. Courson's Newman Lbr. Co. 2, se sw sw 2-2n-10w, dk and

WILKINSON COUNTY—T. E. Stoneman et al's L. T. Ventress 1, ne sw 38-2n-3w, elev 390 ft, ran electrical tester, dry abn, dr 5027 ft.

YALABOUSHA COUNTY—G. M. Langston et al's W. C. Bryant 1, ne sw 21-24n-6e, elev 276 ft, dk and mir.

MONTANA

CARBON COUNTY — Bailey-Round Butte Oil Co.'s 2, sw ne se 3-6s-23e, dr 1010 ft. East Bridger Oil & Gas Co.'s 1, csl se se 23-6s-23e, dr 1540 ft.

FERGUS COUNTY—Emmons et al's Government 3, se ne ne 6-21n-18e, dr 1081 ft. Company's Government 4, sw sw sw 3-21n-18e, dr 432 ft. Judith Operating Co.'s Government 2, cwl nw ne 35-22n-17e, running 8¼ in csg to 3180 ft, td.

PARK COUNTY—Ben W. Ryan's Burgess 1, se sw nw 28-28n-11e, dr 513 ft.

PETROLEUM COUNTY—H. Clark Rowland's Kalispell 1, ne ne se 35-14n-25e, dr 615 ft.

PONDERA COUNTY—Klinch Petroleum Co.'s Hollam 1, nw nw nw 21-28n-6w, dr 2236 ft.

YELLOWSTONE COUNTY—R. C. Tarrant's Mosser 2, cwl sw ne 26-3s-24e, completed as water well for 15,000 bbls water daily, will be used as water well for company's Harper 1, ne sw nw 4-3s-25e, dr 1065 ft.

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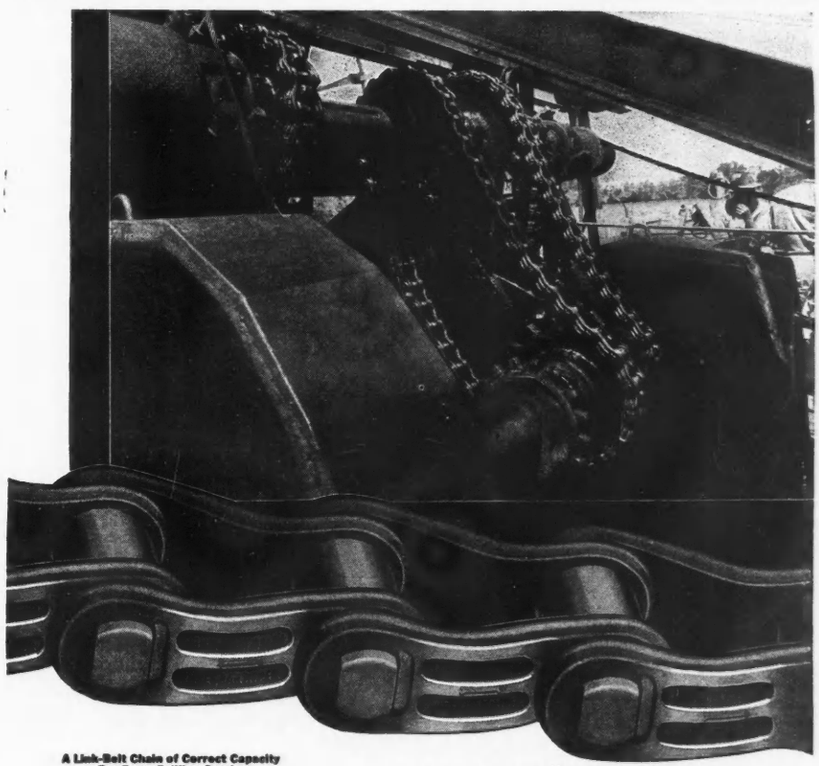

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SS-40+ Red-Hed (API-3)	48,000
SS-124+ Red-Hed (API-4)	112,000
SS-40 (API-3)	28,000
SS-124 (API-4)	60,000

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NEW MEXICO

LEA COUNTY—Argo Royalty Co.'s B. T. Lanehart 1, sw se ne 21-25s-37e elev 3071 ft, hfw and sd 3754 ft. Anderson-Prichard Prod. Corp.'s C. M. Carlson 2, c sw nw 21-25s-37e, elev 3072 ft, dr 1180 ft. Baldridge et al's Blakey 1, c nw ne 5-20s-38e, elev 3586 ft, base salt 2660 ft, sd 2815 ft. Brown & Reynolds' Parcell 1, c nw nw 22-22s-37e, elev 3374 ft, dr 1180 ft; 2875 ft, fsh 3150 ft. Carlock et al (was Talbott & Mullineaux's) Quincy-Ricker 1, c se se 7-16s-36e, elev 3945 ft, top anhydrite 1975 ft, dr 2080 ft. Amon G. Carter et al's E. M. Elliott 1, cn w nw 22-22s-37e, elev 3374 ft, dr 1180 ft; Elliott 2, c ne nw 22-22s-37e, elev 3375 ft, dr 700 ft. C. & G. Oil Co.-The Texas Co.'s Ellen Weir 1, c ne ne 14-20s-37e, elev 3564 ft, td 4074 ft, sdo. J. C. Clower et al's W. H. Turner 1, c se se 29-21s-37e, elev 3469 ft, dr by junk, 3483 ft. Barney Cockburn & Rowan-Nichols Oil Co.'s H. G. Mattern 1, c sw se 7-22s-37e, elev 3426 ft, td 3789 ft, testing. Conoco & The California Co.'s Ira C. Forney 1-A-5, c sw se 5-23s-36e, elev 3457 ft, top anhydrite 1435 ft, dr 3510 ft; Rex Williams 1-A-27, c sw sw 27-23s-35e, elev 3428 ft, cem 7-in cas 1810 ft, dr 1835 ft. Culbertson, Erwin & Stovall's J. R. Stuart-Repollo 2, nw se se 10-25s-37e, elev 3108 ft, fsh 3277 ft. Devonian Oil Co.'s A. L. Christmas 1, ne ne se 28-22s-37e, elev 3339 ft, dr 1910 ft. Empire O&R Co.'s Sim Dabbs 1, c nw nw 23-25s-37e, elev 3086 ft, completed 37 mil ft gas with spray oil, td 3361 ft; R. L. Brunson 1, nw nw se 4-22s-37e, elev 3446 ft, ur 1320 ft; Anna Walden 1, c se nw 21-22s-37e, elev 3352 ft, dr lime 3460 ft. A. R. Eppenauer et al's F. B. Stuart-Amerada 1, ne nw ne 22-25s-37e, elev 3082 ft, dr 840 ft. J. E. Farrell & Co.'s E. W. Walden-Amerada 1-A, c sw nw 15-22s-37e, elev 3407 ft, dr 2250 ft; Walden-Amerada 1-C, c sw sw 15-22s-37e, elev 3396 ft, fsh 3155 ft. Geo. F. Getty Oil Co.'s D. C. Hardy 1, c se se 20-21s-37e, elev 3494 ft, complete flowed 142 bbls oil 6 hrs and 1,000,000 ft gas via 30/64-in choke after 120 qt nitro shot at 3710-3800 ft; D. C. Hardy 2, c sw se 20-21s-37e, rig; Etz 1, c ne ne 12-21s-32e, sp. Harry W. Leonard et al's B. T. Lanehart 3, c ne nw 21-25s-37e, elev 3081 ft, lcn. Magnolia's E. O. Carson 3, c sw sw 28-21s-37e, elev 3467 ft, sd repairs 3468 ft; State 1-G, nw nw ne 24-17s-34e, elev 4019 ft, top anhydrite 1700 ft, dr salt 2555 ft. Maljamar O&G Corp.'s Baish 7, c se nw 21-17s-32e, elev 4046 ft, cem cas 2301 ft. Joe C. Maxwell, R. Crandall & C. H. Osmond's State-Lane 1, c sw nw 32-10s-34e, elev 4205 ft, top anhydrite 2060 ft, base salt 2750 ft, dr 3185 ft. Plains Prod. Co. et al's J. A. E. Knight-Humble 2, c nw sw 22-24s-37e, elev 3234 ft, complete flowing 154 bbls oil 24 hrs 15/64-in choke from sand 3398-3485 ft; Knight-Humble 3, c se se 21-24s-37e, elev 3218 ft, dr 2680 ft; Knight-Humble 4, c sw sw 22-24s-37e, elev 3225 ft, mim. Repollo Oil Co.'s O. J. Boyd 2, nw nw nw 23-22s-37e, elev 3338 ft, dr 3490 ft; A. M. York 1, se se ne 20-21s-37e, elev 3495 ft, cem cas 3643 ft. Rushwold Oil Co.-Conoco & California Co.'s E. E. Carter 1, c nw ne 30-20s-39e, elev 3559 ft, top anhydrite 1616 ft, dr 1660 ft. Samedan Oil Corp.'s S. B. Hughes 2, c nw se 4-23s-37e, elev 3318 ft, dr 1240 ft. Shell Pet. Corp.'s Black 1, c nw ne 21-24s-37e, elev 3227 ft, so&g 3443-49 ft, fsh 3449 ft; State 1-T, c se ne 34-20s-35e, mim. Skelly Oil Co.'s Hugh C. Sims 1-D, c se nw 3-23s-37e, elev 3300 ft, oil sand 3369-79 ft, co and bails 20 bbls 22 gravity oil per hour; J. V. Baker 3, c ne nw 27-22s-37e, cem surface cas 167 ft; R. R. Sims 2, c ne sw 3-23s-37e, elev 3298 ft, dr 1215 ft; R. R. Sims 1-C, c se sw 3-23s-37e, elev 3297 ft, dr 2200 ft; W. P. Sims 1-B, c nw ne 10-23s-37e, elev 3296 ft, dr 2620 ft; F. S. Stuart 1-A, near c ne nw 15-25s-37e, elev 3105 ft, complete flowed 131 bbls oil 12 hrs after 130-quart shot 3360-3402 ft. W. H. Street et al's Wood-Humble 1, near c se ne 22-22s-37e, elev 3355 ft, pb fr 1174 ft to 615 ft, fsh. Sun Oil Co.'s I. R. Stuart 2, c sw ne 15-25s-37e, lcn. The Texas Co.'s Jas. F. Black 1, c sw ne 21-24s-37e, elev 3225 ft, dr 3060 ft; J. D. Young 1, se se se 5-24s-37e, elev 3277 ft, completed flowed 84 bbls oil initial after shot, pb from 3647 to 3589 ft; V. M. Henderson 1, se se ne 30-21s-37e, dr 540 ft. Tide Water Oil Co.'s Coates 1-B, c nw nw 21-25s-37e, elev 3073 ft, flows 45 bbls daily, co 3050 ft.

ROOSEVELT COUNTY—Clovis Dev. Co.'s S. Smith 1, c se ne 17-2s-30e, set 12½-in cas 740 ft. Franklin Oil Corp. et al's Rual Giphant 1, nw nw nw 28-3n-30e, elev 4458 ft, dr 2965 ft. Joe C. Maxwell, Inc., R. Crandall & C. H. Osmond's A. B. Williamson 1, c nw nw 7-8s-36e, salt series 2315-2580 ft, dr 2995 ft.

OKLAHOMA

ATOKA COUNTY—A. J. Sanders' Redden 3, se sw sw 19-1n-15e, bailing.

BECKHAM COUNTY—Mid-American Oil Co.'s Biscoe 1, sw se ne 28-8n-22w, woc 1080 ft.

CARTER COUNTY—Head & Straus' Simpson-Fell 1, nw nw se 8-5s-1e, dr 1232 ft.

CLEVELAND COUNTY — Helmerich & Payne's Glenn 1, cnw ne 6-8n-1w, dr 4400 ft.

COAL COUNTY—Continental's Kirby 1, sw se sw 23-1n-8e, dr 1030 ft. Continental's Breedlove 1, nw sw sw 24-1n-8e, dr 4800 ft. Continental's King 1, ne sw ne 26-1n-8e, dr 5610 ft. Continental's Daniels 1, sw ne sw 27-1n-9e, dr 4949 ft. Carter's Warne 1, ne ne nw 31-2n-9e, dr 5220 ft. Shell Pet. Corp.'s Hill 4-A, cnw 30-3n-10e, dr 5322 ft.

COMANCHE COUNTY—L. D. Wise et al's Cones 1, se se sw 11-1n-10w, td 2156 ft, sd. Frank Scott's Kuntz 1-A, cse ne se 21-4n-11w, dr 1462 ft. C. V. Morris' Young 1, se ne se 24-3n-10w, dr 303 ft.

COTTON COUNTY — Phillips Pet. Co.'s Warren 1, ne ne se 1-5s-13w, dr 3020 ft. Grace-Wood Drlg. Co.'s Wilson 1, csw nw 17-4s-11w, dr 3730 ft.

GARFIELD COUNTY—Ohio's McFarland 1, se se se 25-24n-3w, dr 4667 ft.

GARVIN COUNTY—Ellison & Hammond's Selby 1, cnw nw 24-2n-3w, dr 4835 ft. Pure Oil Co.'s Baker 1, se se ne 7-2n-1e, dr 5245 ft. Luttrell et al's Howell 1, nw se nw 34-1n-1e, td 160 ft, abd.

GRADY COUNTY—R. E. Johnson et al's Thomas 1, se sw se 18-5n-7w, mir.

GREER COUNTY—Nelf et al's Melton 1, cse nw se 16-3n-22w, to test. Bud Lewis et al's Webster 1, sw ne ne ne 7-7n-24w, dr 1002 ft.

HUGHES COUNTY—T. P. McAdams & Barnes' Koch 1, sw ne ne 1-9n-10e, set whipstock 3778 ft. R. K. Ellison's Peters 1, se nw se 8-6n-10e, dr 3390 ft. Mid West Oil Co.'s Turner-Lucas 1, cse nw 13-9n-9e, td 1300 ft, ur 12-in csg.

JEFFERSON COUNTY—Mid-Continent Pet. Corp.'s Reid 1, csw nw 32-6s-4w, sd 1800 ft. Massas & Swansberger's Barrett 1, ne se se 14-6s-6w, sd 21 ft.

JOHNSTON COUNTY—Patten et al's McCrummens 1, sw sw ne 16-1s-6e, td 580 ft, sd for csg.

KAY COUNTY—Max Kelly's Johns 1, nw nw nw 35-27n-4e, td 3107 ft, sd to dd. G. A. Brown et al's Harris 1-A, sw sw ne 14-25n-1e, cel.

KIOWA COUNTY—Argus Pet. Co.'s Osbourne 1, nw nw ne 9-7n-16w, sd 1225 ft. Lykins et al's Aetna Life Ins. Co. 1-A, se se se 9-5n-16w, sd 851 ft. Nagel & Adams' Oster 1, sw ne sw 27-7n-17w, dr 815 ft.

LeFLORE COUNTY—McGraw et al's Tidwell 1, cnw se 17-3n-22e, woc 2300 ft.

LINCOLN COUNTY — Skelly Oil Co.'s Sporn 1, nw ne sw 21-17n-3e, td 4651 ft, pb 4588 ft, gauged 83,300,000 cf gas comp.

LOGAN COUNTY—Anthony & Marshall's Fruin-Eckman 1, se se sw 4-16n-1e, co 4955 ft. Helmerich & Payne's Hasler 1, nw nw se 14-16n-4w, dr 5514 ft.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, td 6927 ft, prep to swab.

MARSHALL COUNTY — Magnolia Pet. Co.'s Gardner 1, cne ne nw 34-6s-6e, dr 1855 ft.

MURRAY COUNTY—Power Oil Co.'s Lancaster Trust Co. 1, csw ne 10-1s-2e, dr 3093 ft. Russell's Fee 1, se nw se 9-2s-3e, dr 65 ft.

NOBLE COUNTY—Shell et al's Moelling 1, csw nw 31-21n-2w, testing. Darby et al's Aetna Life Ins. Co. 1, se se nw 1-23n-2w, woc.

OKFUSKEE COUNTY—Okla Oil Corp.'s Dawley 1, nw nw se 8-10n-9e, sd 1634 ft.

OSAGE COUNTY — Chavalier & Simon's No. 1, se se se 24-23n-9e, sd 2309 ft.

PAWNEE COUNTY — Forest Dev. Co.'s Otter 1, cne nw 15-21n-5e, td 3225 ft, rust.

PONTOTOC COUNTY—Ramsey Pet. Co.'s Johnson 1, nw sw se 9-3n-7e, rur. Delaney & Boettcher O&G Co.'s Alexander 2, sw ne sw 24-4n-7e, co, otd 3520 ft.

SEMINOLE COUNTY — Riverland O&G Co.'s Goebelt 1-A, nw se se 12-6n-6e, pb 2408 ft.

STEPHENS COUNTY—Ed Parson's Olson 1, csw sw 21-2n-8w, dr 5910 ft. Coline Oil Co.'s Johnson 1, csw se nw 1-2n-8w, dr 4790 ft. Edwards' Frederick 1, ne se nw 31-2n-8w, sd 1955 ft. Jack Cohen's Pierce 1, cne nw 24-2s-6w, dr 235 ft.

TEXAS COUNTY — Allison & Barnhill's Bingley 1, sw sw ne 30-2n-18ecm, dr 2200 ft.

TILLMAN COUNTY — Eugene Skinner's Oliver 1, se se nw 22-1s-15w, fsg 1314 ft. I. T. I. O. Co.'s Drumm 1, csw nw 32-2s-17w, td 3816 ft, pb 3813 ft.

EAST TEXAS

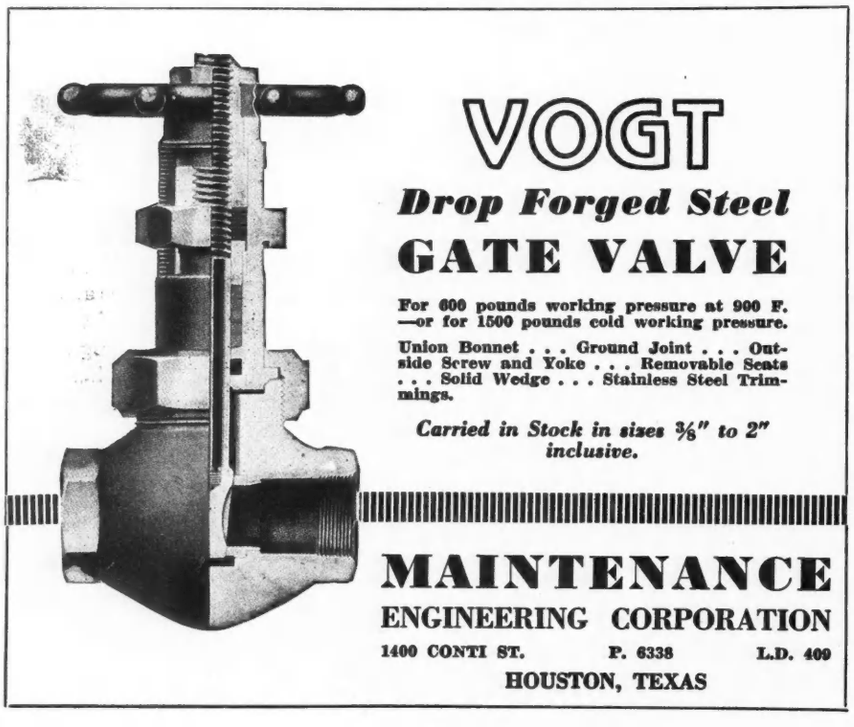
BOWIE COUNTY—Ferguson & Hill's A. Y. Breckenridge 1 (412-ac), Nancy Dycas sur, 4 mi w Texarkana, sd 1003 ft. Woodley & Bentley's J. D. Lumpkin 1 (245-ac), John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, Annona chalk 1665-2090 ft, sd 4404 ft.

CHEROKEE COUNTY—General Crude Oil Co.'s Mrs. S. L. Stockton 1 (103-ac), S. Jarboe sur, 3 mi ne Mount Selman, elev 475 ft, Pecan chalk 3330-3695 ft, top Austin chalk 4160-4371 ft, tested salt water 4383 ft, dr 4400 ft. Dr. H. Hancock, J. G. Mayo et al's Mrs. B. Pryor-Shell 1 (53-ac), J. T. Jones sur, Rusk area, elev 460 ft, cem 10-in cas 400 ft. A. F. Richardson et al's F. P. O'Brien 1 (167-ac), G. S. Clapp sur, 3 mi n by w of Rusk, lcn.

COLLIN COUNTY—E. A. Parkford et al (was California Consolidated Oil Co.'s) Mrs. W. L. Fagg 1 (38-ac), Jas. Rutherford sur No. 4, — mi ne Blue Ridge, elev 626 ft, top Georgetown lime 1980-2651 ft, tested fresh water in Paluxy series at 2771 ft, td 2776 ft, to pb and test upper sand. Port Bolivar Co.'s O. C. Durning-Clarkston 1-A (140-ac), Wm. Creager sur, Pat. No. 1193, 2½ mi ne Anna, elev 722 ft, td 4098 ft, tested trace oil with salt water, sdo; A. Shirley 1 (50-ac), Gwynn Morrison sur, 1 mi e Anna, dk.

DELTA COUNTY—W. S. McGee et al's Mrs. P. W. Miller 1 (52-ac), E. Spencer sur, 1 mi sw Cooper, elev 465 ft, top Woodbine Red Beds 2650 ft, top Georgetown lime 3040 ft, sd 4220 ft.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac), Dennis Herold League, 5 mi sw Kosse, elev 521 ft, top Ed-



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wards lime 3867 ft, top upper Glen Rose 4074 ft, sd 4114 ft.

FREESTONE COUNTY—C. A. Everts Drl. Co. et al's O. W. Killam 1 (840-ac), John Robbins sur, Red Lake area, mim. Fred R. Lovering et al's E. Bonner-Scott 1 (23-ac), H. Awalt sur, 7 mi n Fairfield, Pecan chalk 2175-2286 ft, top Austin chalk 3117 ft, fsh 3860 ft. R. L. Wheelock, J. L. Collins et al's W. R. (Bill) Boyd, Jr., 1 (410½-ac), F. P. Cabler sur, 3½ mi sw Fairfield, rur.

GRAYSON COUNTY — Olson Drlg. Co.-Jas. H. Gardner & Broswood Oil Co.'s D. R. Utiger 1 (160-ac), P. P. Cady sur, 5 mi nw Denison, elev 722 ft, show o&g in Trinity 860-890 ft, base Trinity series 930 ft, top chert 950 ft, sd 1575 ft.

HENDERSON COUNTY — Cosden Oil Corp.'s Mrs. E. P. Miller 1 (1550-ac), Thomas Chaffin sur, elev 451½ ft, top Pecan chalk 3232-3474 ft, Austin chalk 4440-4655 ft, top Woodbine series 4898 ft, tested sw 5136-55 ft, dr 5200 ft.

HOPKINS COUNTY—Empire O&R Co.'s J. E. Worsham 1 (149.36-ac), Alex O. Wetmore sur, Sulphur Bluff area, elev 430 ft, Pecan chalk 1511-1610 ft, dr 3800 ft. Walter L. Goldston and Frankel Bros.' H. J. Smith 3 (450-ac), Jas. A. Craft sur, lcn. D. S. Hager and W. P. Luse's J. G. Reynolds 1 (200-ac), A. O. Wetmore sur, elev 420 ft, cut fault plane about 3860 ft, dr 4100 ft. D. S. Hager, W. P. Luse & Russ Pet. Co.'s J. E. Worsham 5 (192.26-ac), A. O. Wetmore sur, elev 437 ft, Pecan chalk 1515-1527 ft, top Georgetown lime 3615 ft, top Paluxy series 4432 ft, broken pay 4456-4521 ft, complete flowed 60 bbls oil per hour via open tubing; J. E. Worsham 6, cem surface cas; J. E. Worsham 7, elev 427 ft, Pecan chalk 1500-1614 ft, top Georgetown lime cut fault plane about 4280-90 ft, pay section 4479-4517 ft, complete flowed 11 bbls oil per hour via open tubing; Jeff M. Worsham 1 (39.82-ac), A. O. Wetmore sur, cem surface cas. F. D. Jones Drilling Co. et al's Mrs. J. K. Pierce-Gulf 1 (225-ac), Jas. A. Craft sur, mim.

HOUSTON COUNTY — E. R. Mount, Branch et al's Dr. P. S. Griffiths 1 (136-ac), Frank Johnson sur, 3 mi sw Crockett, sp and sd.

HUNT COUNTY—Penn Oil Corp.-Elmer S. and Fox Wood's A. B. Manning 1 (57¼-ac), Sally Owens sur, 5 mi ne Lone Oak, elev 599 ft, dk. Superior Oil Co. (Cal.) and Moncrief & Showers, Inc.'s P. B. Paul 1 (183-ac), Mary Latham sur, 5 mi ne Quinlan, lcn for 6500-ft test.

LEON COUNTY—H. M. Ogg et al's O. Wiley 1, E. Devinney sur, 1 mi w Buffalo, dk. Roth & Faurot O&G Co.'s J. L. Shaw 1 (254-ac), O. R. Reams sur, 5 mi n Centerville, top broken Pecan chalk 4065 ft, base chalk 4290 ft, top Gober chalk 4860 ft, Austin chalk 5150-5390 ft, dr 5750 ft.

LIMESTONE COUNTY—A. H. Grider et al's W. B. Kendrick-Pure 1 (10-ac), Pedro Varella sur, Mexia field, 6100-foot Trinity test, lcn abd. A. W. Phillips & J. Johnson et al's E. M. Speight 1 (136½-ac), M. Herrin and Pedro Varella sur, 4 mi ne Groesbeck, cem surface cas 37 ft.

RAINS COUNTY—Humble O&R Co.'s O. L. J. Easter 1 (39¾-ac), R. Hotchkiss sur, 4½ mi e of Emory, 7600-ft Trinity test, elev 438 ft, Pecan chalk 2177-2862 ft, Austin chalk 3260-3739 ft, top Woodbine series 4225 ft, top Washita 4970 ft, top Georgetown lime 5003 ft, top Paluxy series 6079 ft, coring 6090 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Southern Pine Lumber Co. 3 (392.37-ac), D. D. Bruton sur, 11 mi ne Clarksville, elev 403 ft, missed projected oil pay, dr shale 2110 ft. Carpenter Oil Corp.'s R. E. Anderson 1 (100-ac), S. W. Sims sur, 3 mi n Clarksville, elev 459 ft, top Red Beds 1250 ft, sd 1575 ft. Roy I. Carter Drilling Co. et al's J. A. Tutt 1 (40-ac), Dennis Harty sur, 2 mi s Avery, sp and sd. M. Petroff et al's R. C. Morris 1 (176-ac), Joseph Guest sur, 2 mi w Detroit, sp and sd. Dale Sneed, R. H. Manning & Texfornia Co.'s Hooker-Hughes 1 (80-ac), MEP&P Ry. sur, No. 642, 6 mi sw Lydia, elev 307 ft, Pecan chalk 995-1302 ft, top Austin chalk 2018 ft, sd 2720 ft.

ROBERTSON COUNTY—J. Edward Mills et al's Tony Congelosi 1 (75-ac), Geo. A. Nixon sur, 3 mi sw Hearne, sd 2200 ft.

RUSK COUNTY—Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e of Pirtle, elev 370 ft, Pecan chalk 2468-2793 ft, Austin chalk 3352-3512 ft, td 4725 ft, co. J. W. Shipman et al's Citizens Nat'l Bank (L. T. Burton) 1 (125-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, dr 3600 ft.

SMITH COUNTY — W. L. Cloud et al's Dora Kendall 1-A, John Williams sur, 1¼ mi se Jamestown, sd 2794 ft.

TITUS COUNTY—J. V. McMahon, McIntyre et al's John B. Stevens 1 (777½-ac), J. Muechen sur, 8 mi sw Mount Pleasant, elev 349 ft, Pecan chalk 2290-2600 ft, sd after coring white sand 3697-3714 ft.

UPSHUR COUNTY—Bell Oils, Inc.-Bennett Pet. Corp. & B. L. Watson's W. O. Irvin 1 (249-ac), D. R. Cannon sur, 4 mi ne Coffeyville, elev 241 ft, Pecan chalk 2345-3100 ft, Austin chalk 3371-3419 ft, top Georgetown 3875 ft, dry and abnd 3890 ft.

WOOD COUNTY—G. W. Nix et al's Mrs. E. A. Russell 1, John Delap sur, 4 mi w of Golden, sd 600 ft.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—H. H. Roberts et al's Zion Douglas 1, L. S. Field sur, sd 890 ft. Weiss et al's W. L. Rudd 1, Wm. Steele sur, lcn.

MARION COUNTY — Tom Bell's Carrie Moseley 1, David Lane sur, 12½ in csg 72 ft, sd 500 ft. Holcomb, Thomasson et al's (M. H. Overlees) Lizzie Henderson 1, R. Bennington sur, elev 221 ft, top chalk 1920 ft, top red beds 3748 ft, dr 4365 ft.

PANOLA COUNTY—Glassell & Glassell's Frost Lbr. Co. 1, Mary S. Potts sur, elev 216 ft, using gas for nearby well, td 6002 ft. Williamson 1, H. Coleman sur, elev 213 ft, massive anhydrite 4635-4860 ft, oil odor 4984-5001 ft, dr 5190 ft, shale & lime. Lawler Pet. Co.'s C. T. Becknell 1, Bailey Anderson sur, elev 354 ft, massive anhydrite 4607-5065 ft. White-Goodwin Sand.'s Hill 1, Winny Mann sur, ru & sd. Logansport P. L. Co.'s Rushing 1, Mannan Smith sur, 7-in scg 2477 ft, re-acidized, td 2734 ft. Magnolia Pet. Co.'s E. A. Hull 1, Thos. Applewhite sur, elev 232 ft, top Georgetown 2395 ft top massive anhydrite 4659 ft, claim heavy sg 5940 ft, arr set csg, td 5940 ft lime. Motex Oil Co.'s J. M. Furrh 1, Thos. M. Alstone sur, elev 377 ft, top chalk 1575 ft, massive anhydrite 4660-4905 ft, base anhydrite stringer 4971 ft, claim so & sg, arr set csg, td 5047 ft. Yandell Rogers' Cameron Lbr. Co. 1, Wm. A. Lagrone sur, lcn.

SABINE COUNTY—L. B. House's Bell 1, D. McDonald sur, fsg 2300 ft.

SHELBY COUNTY—Rubeling & Potter's O. H. Polley 1, Wm. Whisner sur, arr deepen td 4200 ft. Red Wing Oil Co.'s C. H. Herton 1, J. Dowlin sur, fsg 1888 ft. Mulroy & Curtin's C. Hayden 1, D. F. T. Yordt sur, elev 312 ft, dr 3935 ft shale. Pure Oil Co.'s J. L. Smitherman 1, S. O. Pennington sur, mim. Wm. Redditt's Pickering Lbr. Co. 1, Stephen English sur, spd & sd 60 ft to complete rur. H. A. Stebbinger et al's Pickering Lbr. Co. 1, C. E. Henry sur, si, td 5029 ft, oolitic lime. Pickering Lbr. Co. 2, A. Hanson sur, lcn.

SOUTH TEXAS

ATASCOSA COUNTY—Frontier Oil Co.'s D. and A. Oppenheimer 1, 193.4-ac tr, J. Sharp sur No. 518, 6 mi s Lytle, dr 170 ft. Helvetia Oil Co.'s Susie Pratt 2, 176-ac tr, F. de la Garza sur, Anchorage prospect, ¼ mi se Pratt 1, td 3428 ft, top serpentine 3085 ft, soft broken serpentine 3224-66 ft, top Austin chalk 3428 ft, td 3460 ft, pb 3250 ft, set 6⅝ in cas 2975 ft, wocs. L. G. Priest, Tr.'s John Sanders 1, 117.61-ac tr, J. P. Garman sur No. 1189, dr 1155 ft.

BANDERA COUNTY—A. T. Crane et al's R. B. Watson 1, A. C. Curver sur No. 71, 2 mi n Medina City, old well, abnd Nov. 12, 1935, td 2035 ft, black shale, ru to dd.

BASTROP COUNTY—Joe E. Mills' Chas. W. Eskew 1, Samuel Wolfenberger sur 18, Hilbig area, top Austin chalk 2865 ft, still sd 2904 ft in chalk. Lee F. Ross et al's J. O. Caldwell 1, 1500-ac tr, J. A. Navarro sur, 10 mi w Bastrop, td 2545 ft, dr Georgetown lime. Paul C. Teas' Clement Vinklarek 1, 100-ac tr, A. Millet league, 10 mi s Smith Villa, td 7142 ft, top Edwards 7133 ft, slight oil show, set 5 in cas 7142 ft, ran swab, made sul water, abn.

BEE COUNTY—Benson & Jones' Geo. A. Ray 1, 40-ac tr, Anna Burk sur, 3 mi e Beeville, old well, td 4500 ft, sd 2000 ft in sdtr hole. Miller-Donzis Oil Corp.'s A. M. Holzmark 1-B, Foley, 135-ac tr, S. May sur, 1200 ft nw Holzmark 1, Foley area, comp 10 bph, ¼ ch, tp 475 lbs.

BEXAR COUNTY—Algra Oil Co.'s Edward C. Peters 1, Miguel Gotari sur 5, sec 4, 13 mi se San Antonio, still sd 670 ft, may abd. American Gas Co.'s Oliver 5, 400-ac tr, M. F. Rodriguez sur, Gas Ridge, sd 3320 ft, lime. Albert Chmel's Theresa McIntosh 1, 274-ac tr, J. W. Garrity sur No. 19, ¾ mi sw Kirby, dr 375 ft. H. V. Hange and G. E. Donnell Willie Mahula 1, 504-ac tr, Jose Maria Bustillo sur No. 29, 5 mi nw Adkins, dr 120 ft, Navarro sh. J. O. Williams' C. Hoch Est. 1, 157-ac tr, J. M. Baerrera sur No. 58, 1¼ mi Von Ormy Pool, dr 310 ft. Woodward, Hardie & Herrold's Herman Sons 1, 2019-ac tr, Henry Pace League sur 37, tr 9, Swearingen, Cassin & Tayloe subd, 28 mi s San Antonio, dr 950 ft.

BROOKS COUNTY—The California Co.'s Mestena O&G Co. 1, Alta Mesa area, B. Garcia tr 5, La Mestena de Gonzalina gr, dst 2946-65 ft, rec 490 lbs pres, no fluid, 10 min, td 3032 ft, prep run 9⅝ in cas; B. Garcia 3-2, tr No. 3, La Mestena de Gonzalina gr, Alta Mesa area, blew out while coring 2448 ft, controlled, conditioning mud to resume operations. Douglas & Burden, Inc.'s N. A. Faller 1, C. M. Laughlin sur No. 434, Alta Verde, 1½ mi se prod, sd 900 ft.

BURLESON COUNTY—M. R. Exploration Co., Inc.'s J. M. Fountain 3, 936-ac tr, blk A-47 of W. Raleigh sur, 700 ft e No. 2, 12 mi ne Caldwell, ru. Red Bank Oil Co.'s Nellie Gramm 1, Elisa Santef sur, abt 2500 ft nw Co.'s Gramm 1, 7 mi w Creisman, 7⅝ in cas 3900 ft, top Georgetown 5953 ft, td 6241 ft, dst in top Edwards, 12 min, rec 180 ft oily mud, no sul water, no pres, ¼ top ch, ½ btm ch, setting cas.

CALDWELL COUNTY — Brown Drilling Co.'s W. J. Pope 2, Salt Flats area, 134-ac tr, John D. Rains sur, 8 mi se Lockhart, 500 ft e Pope 1, lcn; G. M. Blackwell 1, 409-ac tr, John Roe sur, 1500 ft w Grayburg's Blackwell 1, 7 mi sw Lockhart, dr 150 ft. J. G. McKenzie's J. M. Pierce 1, S. Seal league, s of Luling, Dunlap area, still sd 160 ft. R. George Young, Trustee's Lena Schmidt 1, W. C. Williams 1/3 league, 3 mi w Lockhart, dr 65 ft.

DUVAL COUNTY—Argo Oil Co. & John Clopton's Smith-Corkill Est. 1, center e¼ sur 61 (N. Munez sur) or 1092 ft nel and 1104 ft

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sel of 447-ac lse, 2 mi s Hoffman field, sp. Atlantic Ref. Co.'s J. F. Welder heirs 1-H, 131-ac tr, sec 103, Loma Vista area, coring for Loma Novia at 2820 ft, cored Gov't Wells 2727-2739 ft, show sw. Mills Bennett's Ira G. Yates 4, sec 467, 3 mi e Labbe field, D&A 3516 ft; Ira G. Yates 5, 3599 ft sl, 3462 ft wl of sur 560, dr 1000 ft. Bridwell Oil & Gorman-Yoakum Dr. Co.'s W. K. Hoffman 1, B. S. & F. sur No. 117, ¾ mi e Loma Novia field, td 2810 ft, bailed down, filled 550 ft in 12 hrs, ru to pump, est 40 or 50 bpd, sand 2800-10 ft. N. V. Duncan's Worden & Drought 1, GC&SF sur No. 151, just nw disc Charamousca field, abn 1701 ft, tested sw with o&g show, o&g show in Mirando sand 1588-1692 ft. Gilcrease Oil Co. & Tom Graham's M. S. Escobar 1, blk 4, sec 2, 829.5-ac tr, Juan Jose Manuel de la Garza Falcon gr, Buffalo, Texas subd, 2 mi sw Premont area, td 215 ft, laying gas lines to Bennett well for fuel. Magnolia Pet. Co.'s E. & E. Labbe 1, sec 221, 2/3 mi nw Labbe field, dr 1500 ft. Oliver Oil Co.'s M. J. Luby 1, s½ sur 146, lcn. Albert Plummer et al's Herman Danmier 1, ne¼ sec 58, Copeta Garden tracts, addn No. 4, 9 mi s Realitos, dry and abnd 3870 ft. The Texas Co.'s Duval County Ranch Company 1-C, sur 194, 3½ mi sw Colmena field, td 2123 ft, sand 2120-23 ft, dst rec 1500 ft sw, no pres, 15 min, sd, woc. E. R. Thomas' Lillian Parr (was A. Parr et ux) 2, ne¼ sur 2, dr 4100 ft, Hockley sand 4018-24 ft, oil show; dst show 19 jts oily mud, will dr to 4700-ft sand and pb to test. W. L. Wollet & M. D. Masten's Bishop Duval Land Co. 1, se¼ sec 74, 1¾ mi w Hoffman field, td 3007 ft, sw sand 2624-44 ft, abd.

EDWARDS COUNTY—Plateau O&G Co.'s Mrs. R. L. Hatch 1, J. W. May sur, sec 66, HE&WT RR sur, dr 4125 ft sh.

FRIO COUNTY—Amerada Pet. Co.'s Halff & Oppenheimer 7, B. J. Gilman sur, Pearsall, td 5573 ft, set 5 in cas 5237 ft, rust; Halff & Oppenheimer 8, San Antonio Ditch Company sur No. 1104, Pearsall, dr 4520 ft, sh, Navarro sand with o&g show 4015-78 ft, top Navarro 3130 ft, top lower Navarro 3975 ft. Thornton Davis et al's Halff & Oppenheimer 1, John C. Clare sur 336, 1 mi e Pearsall chalk prod, td 6518 ft, acidized with 4000 gallons, swabbed 63 bbls oil 15 percent water in 20 hours, hole swabbed dry, swabbed 10 hours no show, now sd.

GOLIAD COUNTY — Felmont Corp.'s W. Hoff 1, 75-ac lease, BS&F sur No. 7, 3000 ft se Maetze field disc well, coring 3178 ft. Sun Oil Co.'s Lena Fromme 1, L. A. Maetze sur, 10 mi n Goliad, coring 5232 ft. R. B. Swiger's Carrie Wood 1, blk 23, Swiger subd, Wood Ranch, George Villa sur, 15 mi s Goliad, 2 mi e Keystone's Woods 1, wosr.

GONZALES COUNTY—M. S. Holliday et al's T. G. Edwards 1, W. W. Pace 1/3rd league, blk "A", Holliday subd, 3 mi sw of Cheapsides, still sd 933 ft to change drawworks. Reedy & Tull's J. F. Boska 1, B. McClure sur, s of Dilworth, sd 2200 ft. H. H. Weinert, Inc.'s (Marts and Beavans) Martindale 1, J. Robinson sur No. 10, near Ottine, top Austin chalk 3218 ft, D&A 3746 ft.

GUADALUPE COUNTY—W. D. Bacon et al's O. D. Halm 1, Joseph Kent sur, 2 mi s Kingsbury, coring 1678 ft, oil show in ch, top chalk 1652 ft. Detroit Texas Dev. Co.'s W. T. Carter 1, 300-ac tr, 1 mi sw San Marcos river, 2 mi ne Sullivan, td 2356 ft, set 7 in cas 2065 ft, testing on pump, est 200 bpd. Long & Ross' Ed Felix 1, 1½ mi s fr New Berlin, 75-ac tr, V. Duran sur, sand 625-26 ft, sand shale 626 ft to 634 ft, oil show, prep to set cas. Riddle Oil Co.'s E. Nolte et al 1, J. Sowell sur, 6 mi e Seguin, sd 1880 ft.

HAYS COUNTY — R. D. Kelly's W. P. Donalson et al 1, 105-ac tr, J. Vermandi gr, 1½ mi ne San Marcos, sd 721 ft, top Edwards 718 ft.

HIDALGO COUNTY—McCollum Exploration Co.'s John C. Engleman Jr. 1-B, lot 8, sec 259, Tex-Mex Ry sur, La Mestina gr, 1½ mi se Pantana gasser, dr 4910 ft; James McDougal 1, lot 223, blk 1, La Blanca tr, 1½ mi s Pantana gasser, dr 6110 ft. H. J. Porter et al's Sweeny Est. 1-A, lot 1, Wayne Wood subd No. 1, 6 mi sw Donna, dr 5565 ft. Dayle L. Smith Oil Co.'s Fairbanks and Young 1, blk 44, porc 46, 4 mi e Samfordyce field, resumed dr 1950 ft. Union Sulphur Co.'s ARGL &L Co. 10, blk 50, tr 2418, N. Capisallo dist, Mercedes area, td 8306 ft, cutting out tubg at 7100 ft.

JIM HOGG COUNTY—French Oil Corp., Paula V. de Garza 1, sur 269, e of Alworth pool, lcn. J. H. Meek, Jr.'s Martinnez Est. 3-A, sec 623, 1320 ft w Colorado field discovery, ru and sd. Pan-Ultimo Oil Co.'s (Theo Hicks et al), Kohler 1, blk 9, Noriacitas gr, 3 mi nw Hebbronville, dr 4100 ft.

JIM WELLS COUNTY—J. I. Francis & L. A. Simonton's A. Lozano Jr. 1, lot 111, sec 76, Holdeman sub, Seeligson ranch, 4000 ft sw Graham's Bennett 1, dr 720 ft. Gist & Graddy's B. W. Owens 1, Poitevent sur, 3 mi n Bentonville field, fsh 5308 ft. Tom Graham's William Singer 1, lots 71 and 74, sec 76, Holdeman subd, SK&K sur No. 215, western portion Premont area, td 3400 ft, prep perf 3158-64 ft, gas sand 3132-63 ft, oil sand 3163-67 ft, shale 3165-70 ft, sh and sand streaks 3170-83 ft, 2 dst failed, pb and set 3250 ft 5 in cas.

KARNES COUNTY—R. L. Barnett's Fee 2, Alex Hunter sur, 4½ mi ne Karnes City, 800 ft se No. 1, abd 2500 ft. DeGraffe & Reele's Cochran 1, McConnell League 5 mi ne Riddleville, sd 200 ft. H. H. Weinert, Inc., W. E. Porter 1, Victor Blanco gr, D&A 4465 ft.

KERR COUNTY—S. W. Forrests' J. W. Bailey 1, A. L. Starkey sur, No. 408, 3 mi n Ingram, dr 723 ft in lime, hfw.

LAVACA COUNTY—Willshire Union Oil Co's Albert Pohl 1, 120-ac tr, M. Wooten sur, 7 mi nw of Ezzell, dr 1850 ft.

LASALLE COUNTY—Kennedy & Johnston's Gilmer & Wildenthal 1, 140-ac tr, sur No. 283, Santonis Carrasco sur 28, 8 mi se Catulla, dk & sd. W. H. Vernor's M. C. Jefferies, sec 726, HE & WT RR sur, 10 mi se Artesia, still sd 850 ft.

LEE COUNTY—Eleoussa Oil Co's Ira Sanders 1, 102-ac tr, J. Von Roeder sur, sd 2225 ft. James E. Pederson's C. A. Turner 1, D. Hudson sur, 1½ mi se Tanglewood, td 6560 ft, sd.

LIVE OAK COUNTY—J. H. Durbin's J. D. Marbach 4, 429-ac tr, Stephen Hays sur, 2½ mi sw Whitsett, td 917 ft, bailing after recementing. Hagan & Stewart's S. A. Joint Stock Land Bank 1, J. Turner sur, 5 mi w & n of Three Rivers, coring 550 ft in gas sand. Loma Oil Co.'s O. M. Withers 1, Sparks sur, 3 mi n Jacob field, coring 980 ft. Ohio Fuel Supply Co.'s H. J. Rosebrock 1, Louis Romero sur, ne Oakville field, dr 2710 ft, dst 1918-22 ft, dev 70 lbs and little oil in 4 min, dst 2138-45 ft, test 15 fourbles salt water, little oil. V. G. Schimmell's Geo West Est 1, center 160-ac tr in J. Poitevent sur 231, 3½ mi sw Geo West, lcn. Sun Oil Co.'s J. G. James 1, 1258.3 acre, Patrick McGloin sur, ab 28, 1½ mi w Mikeska, coring 4725 ft.

MAVERICK COUNTY—J. W. Boicourt's Edson & Estrada 1, James Eaves sur 68, 12 mi n Eagle Pass, dr 1250 ft ch.

McMULLEN COUNTY—Humble O & R Co.s' H. C. Edrington 2, 330 ft sl & wl, e½, sec 59, A B & M sur, 6 mi ne Seven Sisters field, 2640 ft w No. 1, dr 870 ft. Edwin M. Jones, Harry Ezzell 1, 330 ft nl, & el 160-ac tr, sec 3, Ezzell Ranch subd, Thomas Adams sur, 5 mi nw Simmons City, mim. L. D. Ormsby's J. W. Griffith 10, B. Sparks sur, ab 794, abd 940 ft.

MEDINA COUNTY—Joise Oil Co.'s Medina Irrigation Farms 1, lot 1 blk 32, sec 7, Medina Irrigated farms subd, 1½ mi e Devine, dr 435 ft. R. P. Whitfield's W. B. Odem 1, Henry Castro sur No. 177, ne of Taylor field, dr 690 ft, Taylor. C. Whitting et al's Hondo Nat'l Farm Loan 2, sec 214, Geo Studer sur, ½ mi ne Hondo, dr 986 ft, dry serp. Will Al Wycoff's T. J. Bendele 1, 321.5-ac tr, James Barnhart sur 593, ab 1733, 8 mi s D'Hanis, sd below 300 ft.

MILAM COUNTY—J. O. Kilgore's S. W. Law et al 1, 606-ac tr, S. Wilhelm sur, 3½ mi w Minerva, lcn. W. R. Ritchey's Chas McDermott 1, J. R. Cockrill sur, 6 mi e Cameron, still sd 50 ft.

NUECES COUNTY—I. J. Allen & Seaboard Oil Corp's J. D. Chapman et al 1, sec 80, Laureless Farm tracts, 17 mi sw Corpus Christi, dr 7000 ft. R. B. Bryant & H. H. Howell's Antone Kocurek 1, 330 ft nl & el of n 58-acres of s 113 acres of 172.5-ac tr, J. H. Smith sur 25, 1 mi s Clarkwood, sp & set sur cas. Al Buchanan & Blanco Oil Co.'s W. S. Gandy 1, e½ sec 60, George H. Paul subd, e offset H. Hinds' Sevier 1-A, sp. Camp Prod Co.'s C. Phillip Wardner, Tr (was Chas E. Stratton) 1, Stratton area, sp. Conroe Dr Co. & H. M. Reed's J. L. Mayers 1, lot 4, blk F, sec 107, ¼ mi s Clara Driscoll field, set sur csg, woc. Lonnie Glasscock' J. B. Hunter 2, sec 591, deep test, Saxet field, sand 6726-29, ran steel line measurement, gas & gasoline sand 6720-41, 7 in cas set at 4493 ft, td 6741 ft. Hiawatha Oil Co.'s Hutchins-Stillwell 7, lot 34, Sheppard Farm lots, Saxet deep test, coring 5787, will drill to 6300-ft sand; Mrs. N. J. Griffith 6, Frank sur No. 416, Saxet, cutting out ds at 5000 ft, ds stuck 6408 ft. W. L. Hinds' Clara D. Sevier 1-A, sec 60, Paul subd, Driscoll Ranch, 65 ft se No. 1, 2 mi w Clara Driscoll field, td 6008 ft, perf cas 5720-25 ft, will re-perf. H. S. Moss et al's R. H. Coleman 1, of 320-ac tr, sec 206, Bishop subd, Palo Alto gr, s of Agua Dulce field, coring 5825 ft. Steve Paul et al's Annie T. Smith 1, blk 27, sec 38, Flour Bluff and Encinal Gardens tr, 3½ mi s Flour Bluff field, lcn. Renwar Oil Co.'s W. F. Willoughby 1, 860-ac tr, sec 4-G, Garret sub, Petronvilla Singer sur, 5 mi se Driscoll, sd 4133 ft, woo, may deepen to 6000 ft. Republic Natural Gas Co.'s J. Dunn 15, blk 38, Sheppard Farm lots, deep test, Saxet field, comp no gauge, td 6326, sand 6309-27, 7 in cas 6317. G. M. Richardson et al's R. S. Carter 1, nw¼ of sec 8, Laureless Farm tr, 8 mi s Corpus Christi & 2 mi se Londo, sd 6300 ft boiler repairs. Stamex O & G Co.'s Inc.'s Oliver Bird 1, E. R. Oliver sur No. 162, 3 mi w Baldwin field, lcn; Cox & Cryer 1, 930 ft el & 330 ft south nl, 72-ac tr, Ward & Gallagher sur No. 316 & 166, dr 2800 ft. Texon Dr Co.'s Clara D. Sevier 2-B, relief well, 880-ac tr, W. W. Chapman Lands, Palo Alta Gr, S. Agua Dulce, set 50 ft 16 in cas, now sd.; Mable Eliff 1, 3054-ac tr, A. Longria sur, S. Agua Dulce, td 6547, bldg dk to dd. W.A.R. Oil Co.'s W. S. Hutchins 1, sh 2, G. Frank subd, deep test, Saxet, coring 6280 ft. Wellington Oil Co. & Pan-American Prod Co.'s Clara Driscoll Sevier 1-A, Wm. Gamble sur, se of Clara Driscoll field, dr 5800 ft.

REAL COUNTY—Sun Oil Co.'s Dietert & Oppenheimer 1, sec 7, GWT & P RR sur, 20 mi nw Leakey, dr 1700 ft.

REFUGIO COUNTY—Josey & Bruton's M. F. Lambert 3, blk 50, Swisher sur, 1 mi w Tomoconnor prod cored sand 5541-45 ft, dst

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3536-45 ft show 300 lbs wp, 1 jt oily mud, 5 min, sand 5541-45, td 5903, sand 5881-5903 ft, washing in. Paul Meader's Temple Lumber Co. 1, sec 1, G. W. Maine sur, ab 218, 2 mi sw Austwell, ru. Tidewater Oil Co.'s E. G. Landgrof 1, 220-ac tr, J. Collyer sur, n of Hynes Bay, dr 8210 ft in hard sandy sh. Windsor Oil Co.'s G. W. Bissett 1, John Crockett sur, 1 mi nw of Tivoli, lcn.

SAN PATRICIO COUNTY—Atlantic Ref. Co.'s McCampbell ranch 1-C lot 9, blk 41, McCampbell sub 4, McCampbell area, ru. W. B. Craig's A. E. Nelson 1, s¼, sec 7, first add Taft Farm Lands, 2 mi sw Taft field, moving in. Eleanor Oil Co.'s Wm. Kline 1, lot 5, blk "C" Coleman-Fulton Pasture Co. subd, 2½ mi se Gregory, td 6851, pb 6343 ft running tubg after perf 6297-6305 ft; W. W. Toland 1, 8000 ft n Kline 1, lot 15, blk "A," Coleman-Fulton Pasture subd, 2¼ mi e Gregory dk & sd. Hooper & Rutherford Inc.'s J. D. Willis 1, Gregory area, T. T. Williamson sur, e offset to Eleanor's Kline 1, coring 7200 ft. Texon Royalty Co.'s J. H. Harvey 1, blk 13, Rincon subd, Geo. Sargent sur, ab 231, 4 mi n Gregory, dr 4162 ft.

STARR COUNTY—Howard Bass' Hayden et al 1, s½ blk 4, sur 7, porc 80, 5½ mi ne Rio Grande City, td 1336, running 5½ in cas for test. F. Davenport & Slick Urschel's T. B. Slick est 1, sec 485, 20 mi ne Rio Grande City, dr 4945 ft. Moss & Heard's Ricaby 1, 218 ft el of w p por 83, 15,000 ft n St Hwy e, sp. South Coast Oil Corp's Isabel S. Lopez 1, lot 11, sh 29-B, porc 80, 10 mi n Rio Grande city, d & a 3508 ft, move off rig. Sun Oil Co.'s J. F. Orr 1, porc 103, Juris of Mier, M. Gonzales sur, 4½ mi s Cuevitas field, td 1245 ft, prep core.

VICTORIA COUNTY—Magnolia Pet. Co.'s Willie Beck 1, 132.8-ac tr, T.N.O. sur 1, 4½ mi nw Telferner, dr 4404 ft. Plymouth Oil Co.'s J. J. Welder 1, 6371.9-ac tr, S. Belding sur, ab 141, 7 mi e Nursery, ds stuck 6648, pb & sd/tr 4378 ft, now dr 6260 in sdtr hole, prep run steel line measurement.

WEBB COUNTY—American Texas Oil Co.'s William McKendrick 1, 1700-ac tr, porc 46, 6 mi fr Rio Grande, td 200, woc. French Oil Corp.'s Daniel C. Garcia 1, sur 1121, 3 mi ne Oilton, dr 1541 ft. Frank J. Gravis' Yeager-Strohman 12, sh 5, Las Animas Gr, Albercas area, dr 2410 ft, T. Albercas sand 2075 ft. Ivan Howard et al's Frost Nat'l Bank 3, sur 475, 5 mi w Mirando city, ru; Frost Nat'l Bank 1 (4) in sec 770, abd 2001 ft. Lutex Oil Co.'s Lone Star Construction Co. 1-A, blk 25, SS & B su, porc 12, 13, 14, dr 100. Hope's A. M. Bruni 1, blk 2, sec 857, 5 mi se Mirando City, ru. Superior Oil Co.'s Masterson 1, sec 35, dr 770 ft. Wilcox O & G Corp.'s Puig Bros. 1, sec 9, Loma Blanco Pasture of Joaquin Galan Gr, sur 2183, dr 951 ft.

WILLIAMSON COUNTY—H. F. Toff's H. W. Kunze 1, 75-ac, J. J. Liendo sur, still sd 1330 ft. L. D. House et al's Mille Stewart 1, 151-ac tr, M. de la Villa sur, 11 mi e Bartlett, ru & sd. C. R. Richardson's E. Zeischang 1, 200 ft el, 300 ft nl 100-ac tr, Hamilton & White sur, lcn.

ZAPATA COUNTY—W. C. Bob's J.M.G. Martinez 2, 450 ft nwl, 150 ft nel, s¼ blk 22, W. R. Duke subd, Randado Gr, 1 mi W Charco Redondo field, skidding on. Gilcrease Oil Co.'s A. Trevino 1, blk 3, sec 3, Bode subd, porc 2 & 3, 7 mi se San Ygnacio dr 3573 ft. The Texas Co.'s Whitehead 94, Cerrito Blanco gr, deep test, Escobas field, dr 2443 ft.

ZAVALLA COUNTY—J. F. Wilcox's T. J. Gillam 1, sw¼ sec 11, blk A-2 GWT & T Ry sur, 6 mi ne Batesville ru prep sp.

HOOKS EXPLORATION COMPANY

SEISMOGRAPH - SURVEYS

914 American National Bank Building

Beaumont, Texas

Established oil company with London offices would like to negotiate with producing and refining company with view to acting as European agents. Reply Box. No. 313, care The Oil Weekly, Houston, Texas.

TEXAS GULF COAST

AUSTIN COUNTY—R. L. Hopkins & J. T. McGregor et al's Reineche 1, se of Bellville, J. Stephenson sur, mim.

BRAZORIA COUNTY—Beaty, Bowles & Borsodie's Truska 1, Algoa prospect, H&TB sur No. 6, dr shale 7018 ft.

CHAMBERS COUNTY — Salt Dome Oil Corp.'s Lawrence 1-A, Cotton Lake area, S. Barrow sur, reaming 6508 ft. Sun's White Estate 2, Seabreeze area, T&NO sur, sec 128, woc 8715 ft.

GALVESTON COUNTY — Shell's Maco Stewart 1, Hitchcock prospect, J. Spillman sur, comp ½ bbl 33 gr oil, 3,500,000 cu ft gas 5130 ft.

COLORADO COUNTY—Sterling's South 1, Garwood area, I&GN sur, sec 41, sd 6180 ft.

FT. BEND COUNTY—Sloan & Zook's J. A. Brown 1, Pilant Lake prospect, Barrett & Harris sur, dr shale 2004 ft.

HARDIN COUNTY—Republic's Brooks 2, Silsbee area, J. W. Brooks sur, dr in sdtr hole 6067 ft; same operator's Brooks 3, Silsbee area, J. W. Brooks sur, washing 6979 ft.

HARRIS COUNTY—B. A. Farrell & J. B. Cox et al's Bender Estate 1, w of Humble field, M. W. Travis sur, ru. Geo. Lawrence et al's Zapp 1, Bammel prospect, J. Farwell sur, dr shale 5254 ft.

JEFFERSON COUNTY—David B. MacDaniel et al's J. N. Gilbert 1, Gilbert Ranch area, J. Ricord sur, dr shale 4012 ft. Sun's Broussard 2, Labelle area, W. B. Burton sur, waiting on csg 8217 ft.

LIBERTY COUNTY—J. G. Mayo et al's Dunnam 1, Rumayor prospect, J. Cherry sur, dr shale 5908 ft.

MATAGORDA COUNTY — Continental's Robbins 1, Citrus Grove area, C. Franz sur, dr shale 230 ft; same operator's Hawkins 1, Sheppards Mott prospect, D. McCarthy sur, dr shale 1641 ft. Hammond Exploration Co.'s Croker 1, South Bay City area, E. Hall sur, dr shale 8705 ft. Strake's Sargent 1, Poole Ranch area, Mrs. L. E. Parker sur, fsh 6880 ft. Sun's Craig 2, Hawkinsville, J. Williams sur, dr salt 2099 ft. Tettes & Harris's Pierce Estate 1, Blessing prospect, J. W. E. Wallace sur, sd 7723 ft.

MONTGOMERY COUNTY—W. W. Chapman's Thomas Foster Lumber Co. 1, Willis area, D. Pevehouse sur, no report.

POLK COUNTY—J. K. Dorrance's Wings 1, nw part of county, I&GN sur, coring 5155 ft. Peyton Brother's Kirby & West B-1, Ace area, J. S. Thomas sur, dr shale 3690 ft.

TYLER COUNTY—Republic's Hurd Fee 1, se of Spurger field, Norman Hurd sur, dr shale 7034 ft.

WASHINGTON COUNTY — Stapper Pet. Corp.'s Hoxie 1, S. Sample sur, dr shale 2280 ft. Sun's Lauter 1, Clay Creek area, N. Clay sur, fsh 7502 ft.

WHARTON COUNTY — P. B. Watson's Sweet 1, Magnet area, J. Smith & McKenzie sur, sd 5492 ft. Felmont's General Mitchell 1, Spanish Camp prospect, D. Wade sur, setting 7-in csg 3015 ft.

UTAH

EMERY COUNTY—California Co.'s Unit 1-A, cnw nw 27-23s-11e, is moving on equipment from company's Unit 1, csw sw 22-23s-11e, which will be used as water well.

GRAND COUNTY—Columbia Crude Corporation's Rath-Government 1, ne sw ne 12-25s-20e, dr 1804 ft in Hermosa limestone. Reflection Oil & Gas Co.'s 1, e nw sw 30-20s-22e, sd attempting to kill gas flow of 1,500,000 to 2,000,000 cu ft encountered at 1900 ft. Utah Southern Oil Co.'s Hyde Government 1, s nw nw 32-22s-2e, dr 5818 ft.

SUMMIT COUNTY — Longwall Petroleum Co.'s 1, se sw se 35-3n-5e, running 6⅝ in csg to bottom at 1920 ft.

WYOMING

ALBANY COUNTY—Hal Blakeman's Chappel 1, cne nw 33-21n-76w, dr 1680 ft.

BIG HORN COUNTY—J. W. Bale's Zeisman 1, csw sw 23-49n-89w, sd 1000 ft.

GOSHEN COUNTY—Ohio Oil Co.'s Joseph A. Waggoner 1, cne ne 14-28n-63w, fsg 2387 ft.

HOT SPRINGS COUNTY—Empire State Oil Co.'s Larson 1, nw se nw 32-44n-93w, abd 2307 ft with water in Frontier sands, pulling csg.

LARAMIE COUNTY—Amerada Petroleum Corporation's Morton 1, csw sw 13-13n-68w, woc 11¾ in csg at 7044 ft, 7052 ft td.

NIOBRARA COUNTY — Adams-Louisiana Co. and H. V. Elwell's Sam Joss 1, csl se nw 1-34n-66w, dr 2285 ft.

PARK COUNTY—General Petroleum Corporation's Government 1, nw nw nw 33-47n-100w, dr 3965 ft.

PLATTE COUNTY — Dividend Oil Co.'s Government 1, csl nw sw 17-24n-66w, dr 1300 ft.

NEBRASKA

FRANKLIN COUNTY—William Stienle's 1, se ne se 25-1n-15w, dr 402 ft.

SIOUX COUNTY—J. M. Huber Corporation's Morgan 1, cnw sw 32-35n-56w, dr 2480 ft.

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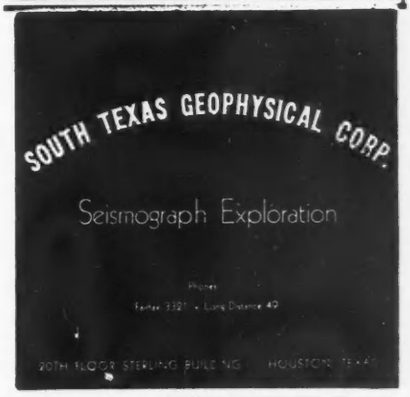

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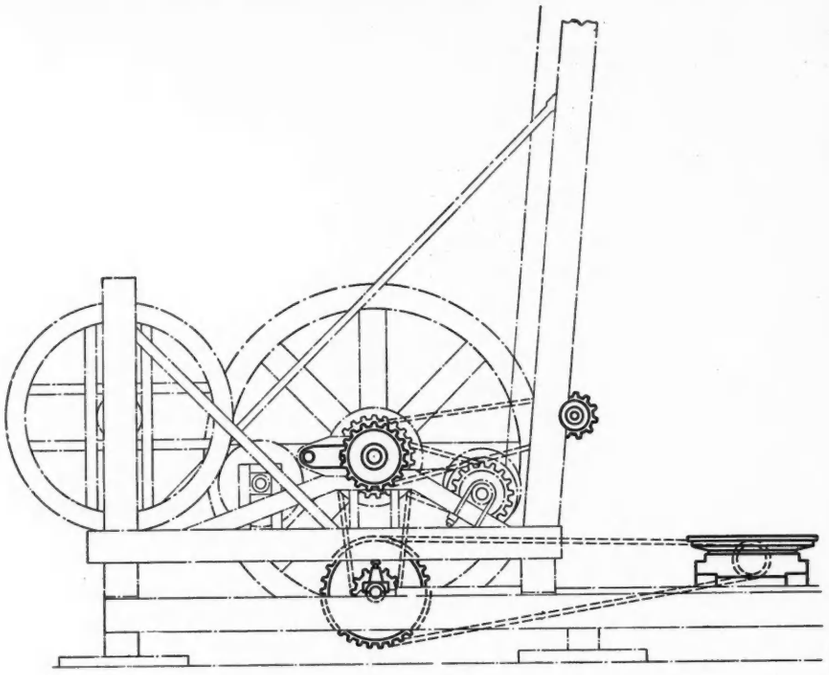
NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Catalogs • Books

ROTARY ATTACHMENT
The National Supply Company

The National Supply Company, Toledo, Ohio, has announced a rotary attachment for the National Portable Drilling Machines. It is for use in fields where both the cable tool and rotary systems of drilling are necessary to get the best results. Examples are parts of West Texas and the glacial drift territory of Michigan, the manufacturer states. In both these districts, the attachment has proven to be a successful means of handling such conditions.

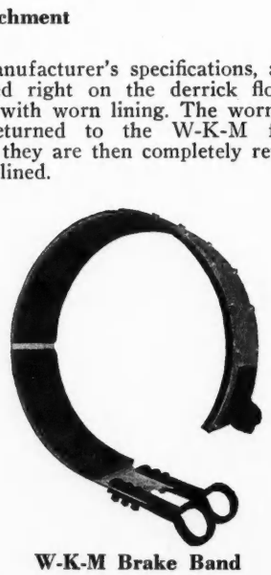
The addition consists of a rotary table drive and a cat head drive and shaft, is simple and can be inexpensively applied to every National Drilling Machine. Since the calf reel is used as the draw works, and the controls are not disturbed, changing from one system to the other is quick and convenient. A complete description is available in a recently published bulletin.



National Rotary Attachment

BRAKE BAND EXCHANGE SERVICE
W-K-M Company

W-K-M Company, Houston, is operating a brake band exchange service whereby exact duplicates of original bands, lined with solid interwoven lining made to the manufacturer's specifications, are exchanged right on the derrick floor for bands with worn lining. The worn bands are returned to the W-K-M factory, where they are then completely reworked and relined.



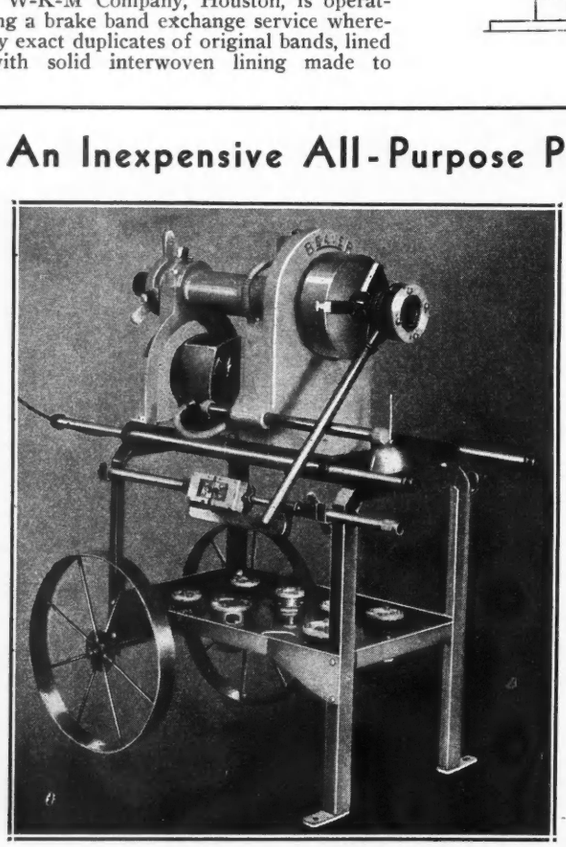
W-K-M Brake Band

The advantages of this type of service, as pointed out by the manufacturer, include a saving of several hours shut-down time by handling the job on the derrick floor. Old bands are cleaned and painted with rust-resisting paint before relining; clevises are rebushed, if necessary; and all kinks and bends are removed from the old bands as a part of the service.

W-K-M brake lining employed in this service is friction material, solid interwoven lining. The manufacturer explains that while it contains 25 percent more soft annealed wire than most woven linings, that score and wear on drums is minimized.

W-K-M brake lining is also furnished cut to desired lengths.

An Inexpensive All-Purpose Pipe Machine!



To make electric power equipment available at moderate cost, we offer the No. 46 Beaver Power Drive with portable stand as shown —Price $195.00.

To cut 1/2 to 2-inch pipe with the Power Drive we recommend No. 5 Square-end Cutter—Price $15.00.

To thread 1/2 to 2-inch pipe we recommend No. 17 Beaver Unit Ratchet, 1/2 to 2-inch, at $21.00.

The Power Drive will also cut and thread up to and including 12-inch by means of an extension drive shaft and geared cutters and threaders.

The Portable Stand may be bought for $20.00 additional.

Sold by all leading supply houses.

Write for Complete New Catalog of the Modernized Beaver Line!

BEAVER PIPE TOOLS

1200 Week Ave. Warren, Ohio

This Week with the Industry's EQUIPMENT SUPPLIERS

JOHN A. CHAPMAN

John A. Chapman Named A. P. E. S. Board Member

John A. Chapman, assistant general manager of Lucey Products Corporation, has been elected a director of the American Petroleum Equipment Suppliers Association, succeeding F. E. Bernsen, president of Lucey Products Corporation, who recently resigned. At a recent meeting of members, all directors were re-elected, Bernsen's resignation having followed his re-election.

Jarecki Opens Rodessa Store

Jarecki Manufacturing Company recently opened a new store at Rodessa, Louisiana. D. B. Curry is manager and field salesman, and Messrs. Paul Carpenter and J. E. Chism are the store men. A full line of Jarecki oil field equipment is being carried.

Dowell Adds Engineer to Mexican Subsidiary

J. M. de la Garza Cardenas, formerly chief inspector for the Mexican government's petroleum department, now employed by Dowell S. A., the Mexican subsidiary of The Dow Chemical Company of Midland, Michigan, is a visitor in the Mid-Continent area. Dowell S. A. operates in Mexico in a capacity similar to that of Dowell Incorporated in the United States. Cardenas, who is a graduate in petroleum engineering from the University of California, has been associated with the petroleum department of the Mexican government for the past seven years. Completing his tour of the oil fields in the United States, Cardenas will be located at Tampico, Mexico. He was accompanied from Mexico to the United States by P. E. Fitzgerald, geologist for Dowell Incorporated, who attended the recent A.I.M.E. meeting in Mexico City, where he read a paper on acidizing practice.

GEORGE COLLOM

Thornhill-Craver Company, Houston, announce the recent appointment of George Collom as South Texas representative, working out of Corpus Christi.

Evidences of improved business conditions are seen in the accompanying illustration of the Axelson Manufacturing Company's office force. Doubled and then redoubled during the past 18 months, the company's office personnel is the largest in the history of this 45-year-old concern.

According to J. C. Axelson, president, the same expansion has been made as far as plant employes and field personnel is concerned. Foreign representation has likewise been increased to render a better service to customers.

American Brass Distributor Metal Goods Corporation

American Brass Company, Waterbury, Connecticut, announces appointment of Metal Goods Corporation, Houston, as distributors. Under the new arrangement research laboratories of American Brass Company will be at the disposal of engineers and customers of the new distributor.

Well Equipment Makes Personnel Changes

Well Equipment Company of Houston has made several changes in its personnel and enlarged the territory covered by direct company representatives.

Ralph (Red) Walker, formerly with Eastman Oil Well Surveying Company, has joined Well Equipment Company. He has been given the Corpus Christi territory.

Earl Grissom, who has been with the company for sometime, has been transferred from Corpus Christi to Oklahoma City. This gives the company representation in Oklahoma and Kansas.

Jack Clements is now covering the Rodessa area in place of Riley Carter, who has been transferred to Kermit, Texas, from which point he will cover the West Texas and New Mexico fields.

John Yerger has been moved from the Houston office to Lake Charles and will be in charge of the Louisiana Coast region.

J. A. Stevens has been transferred from West Texas to Houston to cover the Texas Gulf Coast district.

Humphrey Appoints Fouts Representative

Humphrey Steel Products Company, Dallas, has appointed The Fouts Company as exclusive sales representative for Humphrey diamond-type steel oil derricks. Stocks will be carried at Kilgore, Corpus Christi and Odessa, Texas, Shreveport, Louisiana, and Tulsa, Oklahoma.

Dodge Manufacturing Shows Exhibit in Houston

Dodge Manufacturing Corporation, Mishawaka, Indiana, together with its factory representatives and district distributors, were hosts to plant superintendents and engineers of Houston and vicinity on December 9. The company presented its 62nd showing of the "Dodge Power Round-Up," a traveling exhibition demonstrating the concern's line of power transmission equipment.

Last February the show was placed on the road. Thus far more than 7000 plant superintendents and engineers have seen it in 62 cities of the Middle West, East and South. The apparatus is transported from city to city by truck. From Houston, the exhibit goes to El Paso, then to the Pacific Coast. It is planned to exhibit in all principal industrial centers of the nation. The tour is expected to be completed next February, at which time 18,000 miles probably will have been covered.

More than 5000 pounds of transmission

equipment, most of which is in actual operation, is included in the show. Lantern slides showing the application of products and charts illustrating the products with cross-sectional views are used by those lecturing. The equipment is set up before a photograph enlargement that is 8 feet high and 18 feet long and which shows the interior of the company's machine shop at Mishawaka, Indiana.

Dodge Manufacturing Corporation has as its factory representatives in Oklahoma and Texas the Industrial Sales and Engineering Company of Houston, Tulsa and Dallas. Distributors in the Gulf Coast area are: Norvell-Wilder Supply Company; Brance-Krachy Company; and Peden Iron & Steel Company. J. H. Drapier of Industrial Sales and Engineering Company, who has been factory representative for the company for 22 years, was in charge of the Houston exhibition.

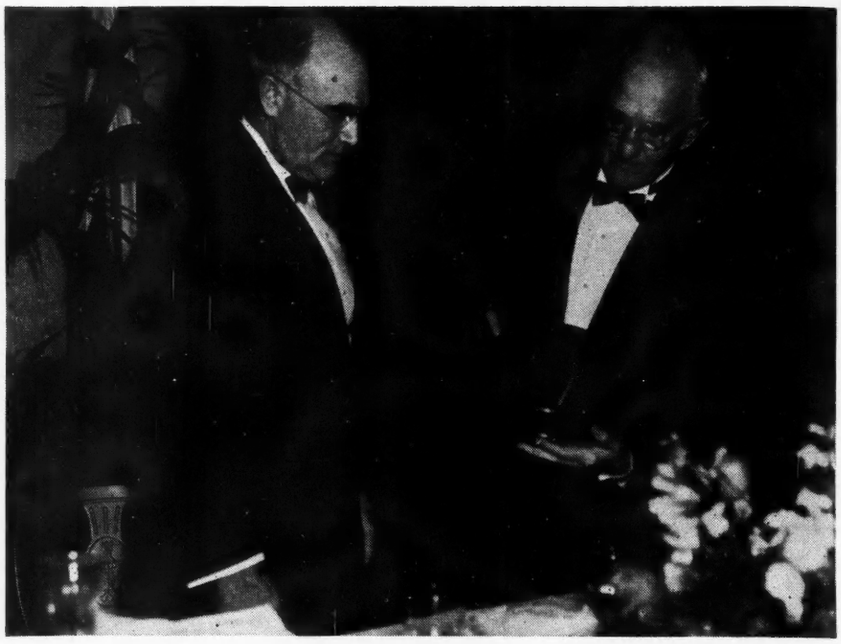
Three men from the Dodge factory accompany the exhibit and present the show to those attending. They are: R. C. Sollenberger; George C. Miller, Jr.; and Earl Gee.

B. F. Goodrich Company Honors Road Center Line Originator

The man who originated the center traffic line now in universal use for marking highways was honored for this contribution to motoring safety at the annual banquet climaxing the thirty-fourth annual meeting of the American Automobile Association at the Hotel Statler, Detroit, Friday night, November 20.

Edward N. Hines was presented with a plaque commemorating his contribution by J. D. Tew, president of The B. F. Goodrich Company, which some time ago launched a search throughout the country for originator of the center traffic line.

Many claims were received. These were turned over to a committee of which Thomas P. Henry, president of the American Automobile Association was chairman. The other members were Austin F. Bement, former executive secretary of the Lincoln Highway Association, and Chris Sinsabaugh, of Automotive Daily News.



J. D. Tew (left) president of The B. F. Goodrich Company, presenting Edward N. Hines, member of the Board of Wayne County Commissioners a plaque recognizing Hines as the originator of the center traffic line now in universal use in highways. Presentation made at the dinner of the annual convention of the American Automobile Association at Detroit.

In presenting the plaque, Mr. Tew said:

"Mr. Hines years ago conceived and put into execution the center traffic line, an idea which has probably contributed as much to motoring safety as any single safeguard now universally in use. It is a privilege to honor him."

Hines has been a road commissioner for Wayne County since the inception of the Board of Wayne County Commissioners over 30 years ago, and has originated many other highway safety ideas which have received general acceptance.

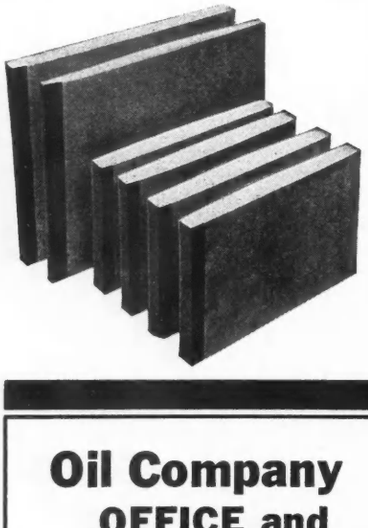
Gustin-Bacon Add to Sales and Development Force

J. F. Stephens, general manager of industrial department, Gustin-Bacon Manufacturing Company of Kansas City, Missouri, announces Virgil F. Halliburton has become associated with the company as product development engineer. Formerly Halliburton was with Mid-Continent Petroleum Corporation, Shell Petroleum Corporation, Gulf Oil Corporation, and and other companies.

Lynn Elliott also now is associated with Gustin-Bacon in the Fort Worth, Texas, branch as sales representative and will cover the East Texas field. H. O. Sigler has been added as sales representative at Wichita, Kansas, and Paul O. Craig as sales representative in the Houston branch of Gustin-Bacon.

Arthur Eckhardt Transferred by Magnus

Arthur Eckhardt who formerly represented the Magnus Chemical Company, Garwood, N. J., manufacturers of cleaning materials, industrial soaps, sulfonated oils, emulsifying agents and metal working lubricants, in the states of Iowa and Illinois, has been appointed to represent Magnus products in Texas.



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These forms are printed on 16-lb. bond paper. They are substantially bound. Duplicates are printed on colored bond and perforated, Pencil carbon included with each book.

After carefully reviewing the forms of a number of oil companies, The Gulf Publishing Company has made up nine standard forms listed above and has produced these in such quantities as to enable oil companies to secure them at substantial savings.

Forms will be shipped prepaid at prices shown. Samples will be sent upon request.

Large volume of sales enables us to offer these forms at reduced prices as follows:

1 to 4 books (all of one form or assorted)—$1.00 per book
5 to 9 books (all of one form or assorted)—.85 per book
10 or more books (all of one form or assorted)—.70 per book

GULF PUBLISHING COMPANY, 3301 Buffalo Drive, Houston, Texas

Squeaks from the Bull Wheel

Financial Genius

"Dad, it says here that a certain man was a financial genius. What does that mean?"

"That he could earn money faster than his family could spend it."

Order in the Court

The defense attorney was cross examining the witness. Said witness was a fetching blonde with two lovely big blue eyes. The lawyer leaned forward.

"Where were you," he thundered, "on Monday night?"

The blonde smiled sweetly.

"Automobile riding," she replied.

"And where were you," bellowed the lawyer, "on Tuesday night?"

"Automobile riding," repeated the beautiful blonde.

The lawyer leaned still closer.

"And what," he murmured, "are you doing tomorrow night?"

The prosecuting attorney leaped from his chair.

"Your Honor," he protested, "I object to that question!"

The judge, a tolerant gentleman, shrugged his shoulders.

"And why do you object?" he inquired mildly.

The prosecuting attorney drew himself up in righteous indignation.

"Because," he snapped, "I asked her first!"

Best Policy

Angus—If you've found such a valuable ring the honest thing is to advertise for the owner.

Sandy—Ay, mon. Which newspaper has the smallest circulation?

Hire Education

Two professors were talking between halves at a football game. The professor from A University said to the professor from B University, "I see Zilch is playing on your team this year. He flunked out of our school."

"Really?" said the professor from B University. "He has done very well here."

"How did it happen?"

"Well, we figured that if you required an average of 75 for most students to pass, it would be only fair to require an average of 50 from him."

"That sounds all right. So he made an average of 50?"

"Yes. Of course, we gave him a special examination."

"I see. How many questions did you ask him."

"We decided that if you asked the average class 10 questions, it would be fair to ask him two. So we did. And he passed."

"I see." The professor from A University was silent for a moment. Then he said, "Would you mind telling me what the questions were?"

"Not at all. First I asked him what was the color of blue vitriol acid, and he said 'Pink,' and that was wrong. Next I asked him if he knew how to make sulphuric acid, and he said 'No,' and that was right, so I passed him."

His Difficulty

There was a big religious revival going on among the colored folk. Many souls had been saved, but there was one hardened sinner who refused to answer the Lord's call.

There was much singing and praying and exhorting but the old fellow wouldn't budge from his seat and join the prayer circle down before the pulpit.

"Why won't you come?" demanded the preacher. "Why won't you?"

"Well, brother," the ancient replied, "I'se got a difficulty. I can't quite see how I'se gonna git mah nightgown on ovah my wings when I gits to Glory."

"Don't you go worrying 'bout that," retorted the evangelist. "Yo' difficulty is gonna be how is you gonna git yo' hat on ovah yo' horns."

Poor Father

"I wish I knew what to get father for Christmas. He likes to go after small game, but I can't afford to buy him a shotgun."

"Get him a fly swatter."

The Philanthropist

"How can you talk to me like that," she wailed, "after I've given you the best years of my life?"

"Yeah?" returned the husband, unimpressed by her emotion. "And who made 'em the best years of your life?"

Depends on Locality

"Will you please explain to me the difference between shillings and pence?"

"You can walk down the street without shillings."

Knew Her Man

"But, my dear madam, it's no use consulting me about your husband. I'm a horse doctor."

"That's why I came to you. He's a chronic kicker."

Too Easy Beau

Did the noise we made worry your folks when I brought you home last night?

Oh, no! It was the silence.

Ohm Guessing

"What is meant by 'current' opinion?"

"It means what the light company claims you owe 'em each month."

Embryo

The marble tournament was on in full fury. One little boy had missed an easy shot, and let slip a real man-sized oath.

"Edward!" called a preacher from the spectator's bench. "What do little boys who swear when they are playing marbles turn into?"

"Golfers," was the reply.

Commence

A Yale player was teaching some cowboys how to play football. He explained the rules and ended as follows:

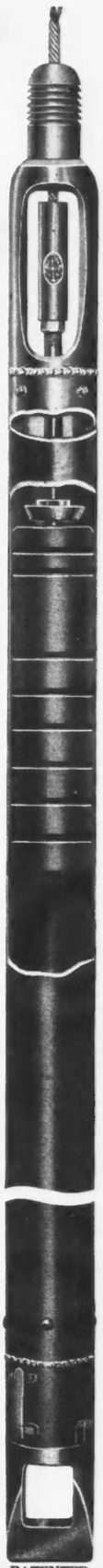
"Remember, fellows, if you can't kick the ball, kick a man on the other side. Now let's get busy. Where's the ball?"

One of the cowboys shouted: "T'hell with the ball! Let's start the game!"

FOR CLEANING ANY WELL

Remember the Name

MILLER



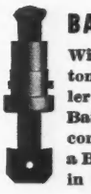
INCREASE your profits per well by cleaning them with a MILLER Sand Pump—the tool with world wide acceptance.

The sand and mud in your well is holding back your oil and keeping down production. The MILLER Sand Pump, with its enormous suction action, will easily and quickly remove this sediment. The fact that thousands and thousands of MILLERS are being used all over the world, proves it the popular sand pump for cleaning wells.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. Nine gauge seamless tubes used in Regular type Sand Pump. One quarter inch wall tubes furnished when extra heavy Sand Pumps are desired.

SAND BOTTOM

Used when tools are run and when well is shot to quickly remove loose material.



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With the Bailer Bottom installed the Miller is changed to a Bailer giving you a combination of either a Bailer or Sand Pump in one tool.

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In Pump)

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